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DISTANCES BETWEEN PORTS

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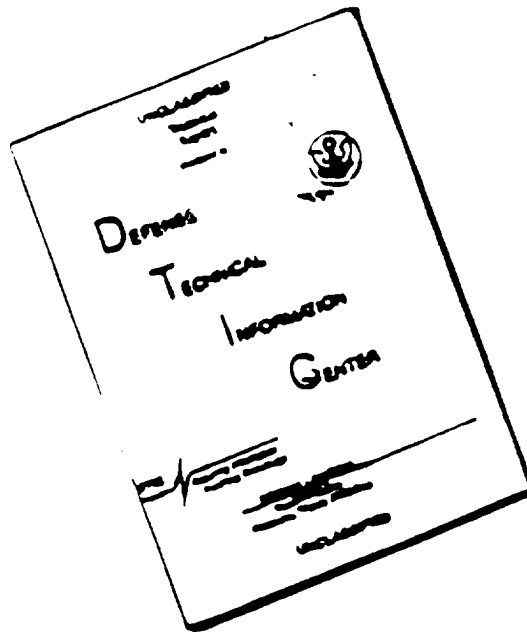
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PREFACE

This is the 1965 edition of H.O. Pub. No. 151, Distances Between Ports; it supersedes the 1964 edition. Distances in these tables are in nautical miles based on the International Nautical Mile of approximately 6,076.1 feet. Nautical miles may be converted to Statute miles of 5,280 feet by multiplying by 1.15. (See conversion table at back of book.) The positions listed for ports are central positions that most represent each port. The distances are between positions shown for each port and are generally over routes that afford the quickest passage. Most of the distances represent the shortest navigable routes, but in some cases longer routes that take advantage of favorable currents or avoid unfavorable currents and thus gain a quicker passage have been used. In other cases, increased distances result from routes selected to avoid ice or other dangers to navigation or to take advantage of aids to navigation or prominent landmarks. In addition, many of the distances between North Atlantic ports reflect increased mileages due to the use of the North Atlantic Lane Routes which have been established to avoid ice and to promote the safety of life at sea in that area of congested traffic. Distances over routes of a navigator's own selection may differ from those given.

DESCRIPTION OF THE TABLES.—Except for Great Lakes ports and distances, which are given on a single-page table, departure ports are listed alphabetically with distances to arrival ports listed below them; distances to appropriate junction points are also listed.

JUNCTION POINTS.—It is impractical to give all distances for every possible combination of ports in this volume; however, the use of Junction Points greatly increases the number of distances that may be included by affording a means of connecting routes in adjacent areas. In this book a Junction Point is a position where many routes converge and through which ships pass when sailing from one major area into another. For example, the Junction Point for

routes from the Atlantic into the Mediterranean is the Strait of Gibraltar. Junction Points used in this publication are shown on the accompanying Route Chart and are specifically designated.

HOW TO USE THE TABLES.—The table for distances in the Great Lakes is self-explanatory. To obtain distances in other areas, find the departure port in the alphabetical listing and select the desired arrival port and distance listed below. In most cases, the distances from one port to another and return are reciprocal, but in some cases, the distances differ because different routes were used which take advantage of favorable currents or weather on one or both of the routes. Therefore, to obtain the correct distance, it is important to enter the alphabetical listing with the port from which you are to depart.

To obtain a distance over a route that passes through a Junction Point, it is necessary to find and add distances for the two or more sections into which the route is divided.

For example:

To find the distance from New York to Colombo, Ceylon, extract and add distances as follows:

New York to Strait of Gibraltar	
(Track C)	3,180
Strait of Gibraltar to Port Said	1,943
Port Said to Colombo (May to September)	3,494
Total nautical miles	8,617

ROUTES.—The chart in the front of the book gives a graphic presentation of Junction Points and a number of representative Tracks. When this chart is used with the Sailing Directions and the seasonal Pilot Charts, it will be found useful in selecting any particular desired route. The explanatory remarks on the chart should be read.

A selection of recommended routes, together with articles on currents and meteorology for

Specific ocean areas, is presented in nearly all volumes of Sailing Directions. A list of Sailing Directions published by the Oceanographic Office is given in the back of the book.

A limited number of routes and distances is shown on Oceanographic Office Chart No. 1262, Track Chart of the World.

CORRECTIVE INFORMATION.—Mariners are requested, in the interest of navigation, to notify the U.S. Naval Oceanographic Office directly, or through one of its branch offices or collection representatives, of any error discovered in this book.

MILEAGES

OCEAN PORTS

TRANSIT TIMES

end

NORTH ATLANTIC LANE ROUTES

In compliance with Article 39 of the International Convention for the Safety of Life at Sea, revised by the North Atlantic Track Agreement, January 1950, vessels should follow, as far as circumstances will permit, the North Atlantic lane routes, which are as follows:

UNITED STATES—TRACK "A" (extra southern) will only be brought into operation when necessity arises.

Eastbound.—From the position in latitude $40^{\circ}10'$ N., longitude $70^{\circ}00'$ W., or from Boston Light Vessel, steer by rhumb line to cross the meridian of $47^{\circ}00'$ W., in latitude $39^{\circ}30'$ N., and from this latter position nothing north of the great circle to Fastnet or Bishop Rock.

Westbound.—From Fastnet or Bishop Rock, steer by great circle, but nothing south, to cross the meridian of $47^{\circ}00'$ W., in latitude $40^{\circ}30'$ N., thence by rhumb line to a position south of Nantucket Light Vessel or to Boston Light Vessel when bound for that port.

TRACK "B" (southern) will be used from April 11 to June 30, both days inclusive, except when ice conditions necessitate the use of Track "A."

Eastbound.—From the position in latitude $40^{\circ}10'$ N., longitude $70^{\circ}00'$ W., or from Boston Light Vessel, steer by rhumb line to cross the meridian of $47^{\circ}00'$ W., in latitude $40^{\circ}30'$ N., and from this latter position nothing north of the great circle to Fastnet or Bishop Rock.

Westbound.—From Fastnet or Bishop Rock, steer by great circle, but nothing south, to cross the meridian of $47^{\circ}00'$ W., in latitude $41^{\circ}30'$ N., thence by rhumb line to a position south of Nantucket Light Vessel or to Boston Light Vessel when bound for that port.

TRACK "C" (northern) will be used from July 1 to April 10, both days inclusive, except when ice conditions necessitate the use of Track "B."

Eastbound.—From the position in latitude $40^{\circ}10'$ N., longitude $70^{\circ}00'$ W., or from Boston Light Vessel, steer by rhumb line to cross the meridian of $50^{\circ}00'$ W., in latitude $42^{\circ}00'$ N.,

and from this latter position nothing north of the great circle to Fastnet or Bishop Rock.

Westbound.—From Fastnet or Bishop Rock, steer by great circle, but nothing south, to cross the meridian of $50^{\circ}00'$ W., in latitude $43^{\circ}00'$ N., thence by rhumb line to a position south of Nantucket Light Vessel or to Boston Light Vessel when bound for that port.

GENERAL INSTRUCTIONS.—Vessels bound to or from United States ports calling at Halifax or St. John, N.B., have the option of following either the Canadian or United States Seasonal Tracks to or from those ports, passing 40 miles south of Sable Island westbound, and 60 miles south of Sable Island eastbound, when proceeding on United States Tracks and Canadian Track "D." When proceeding on Canadian Tracks "E" or "F" via Halifax, ships pass north of Sable Island both eastbound and westbound.

Note.—See General Instructions regarding Canadian Tracks for vessels bound to or from the north of Ireland.

Vessels bound direct to Portland, Maine, may follow the Canadian Seasonal Tracks.

When courses are changed from great circle to rhumb line or vice versa any time before or after noon, commanders must note in their logs both distances to and from that point of alteration, and not the distance from the position at noon of the day before to the position at noon the day after that meridian is crossed.

The date on which Tracks change is to apply to the meridian of Fastnet for westbound vessels and to the meridian of $70^{\circ}00'$ W. for eastbound vessels. Ships passing these positions before the applicable date of changing Tracks will not alter Tracks, except when changes are made from a northern to a southern Track owing to the presence of ice, in which case the change should be made forthwith having due regard to the crossing situation.

Communications on general Track matters between the British Lines will pass through Cunard White Star, Ltd. The Holland-Amer-

ica Line will communicate with the Continental Lines, excepting that, during the ice season, the Cunard White Star, Ltd., will communicate direct with all lines.

With regard to proposals for any changes in Tracks, owing to the prevalence of ice, the Cunard White Star, Ltd., in Liverpool will communicate with the lines by telegraph as to the dates on which changes are to become operative. Lines undertake to give immediate instructions to their steamers in accordance with such advises.

Note.—When these Tracks are in operation the directions given under their respective heads should be followed. The Tracks and their effective dates will be found on the April Pilot Chart of the North Atlantic Ocean, and any changes other than those scheduled are given publicity by Hydrolants, the Daily Memorandum, and Notice to Mariners, issued by the United States Naval Oceanographic Office.

CANADA.—TRACK "D" will be used from February 15 to April 10, both days inclusive.

Eastbound.—From Halifax or other port, steer to pass 60 miles south of Sable Island, cross the meridian of $50^{\circ}00'$ W., in latitude $42^{\circ}00'$ N., thence by great circle to Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer by great circle to cross the meridian of $50^{\circ}00'$ W., in latitude $43^{\circ}00'$ N., thence to Halifax or other port, passing not less than 40 miles south of Sable Island.

TRACK "E" will be used from April 11 to May 15 or until the Cape Race route is clear of ice, and from December 1 to February 14.

Eastbound.—From Halifax or the Gulf of St. Lawrence, steer to cross the meridian of $50^{\circ}00'$ W., in latitude $45^{\circ}25'$ N., thence by great circle to Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer by great circle to cross the meridian of $50^{\circ}00'$ W., in latitude $45^{\circ}55'$ N., thence to Halifax or the Gulf of St. Lawrence when open to navigation.

Note.—The Donaldson Line reserves the right to cross longitude 45° W. in latitude 45° N. on this Track.

TRACK "F" will be used from May 16 to the opening of the Belle Isle Route, and to November 30 when not using the Belle Isle Route.

Eastbound.—From Halifax or the Gulf of St. Lawrence, steer to a position in latitude $46^{\circ}12'$ N., longitude $53^{\circ}05'$ W., thence on a course 10 miles south of the great circle until approaching Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer on a course 10 miles north of the great circle until approaching Cape Race, then steer a course to position latitude $46^{\circ}27'$ N., in longitude $53^{\circ}05'$ W., thence to Halifax or the Gulf of St. Lawrence.

TRACK "G" will be used from the opening of the Straits of Belle Isle to November 14.

Eastbound.—From Belle Isle, steer on a course 10 miles south of the great circle until approaching Inishtrahull, Fastnet, or Bishop Rock.

Westbound.—From Inishtrahull, Fastnet, or Bishop Rock, steer on a course 10 miles north of the great circle until approaching Belle Isle.

GENERAL INSTRUCTIONS.—Vessels bound to or from United States ports from or to the north of Ireland have the option of following either the United States or Canadian Seasonal Tracks "D," "E," and "F," remaining on Track "F," during the operative dates of Track "G."

On Tracks "E" and "F," vessels pass 40 miles south of Sable Island westbound, thence to a position south of Nantucket Light Vessel, and eastbound from position $40^{\circ}10'$ N., in $70^{\circ}00'$ W. to position 60 miles south of Sable Island.

On Track "D," westbound proceed by rhumb line from position $43^{\circ}00'$ N., in $50^{\circ}00'$ W. to position south of Nantucket Light Vessel, and eastbound from position $40^{\circ}10'$ N., in $70^{\circ}00'$ W. to position $42^{\circ}00'$ N., in $50^{\circ}00'$ W.

Commanders, on encountering ice, have permission to deviate from these Tracks and, after the end of October, leave the Belle Isle for the more southerly route at their discretion, according to weather conditions.

Should vessels on Track "C" bound to or from the United States be deviated to Track "B" on account of ice, Canadian vessels will remain on Track "D" for the period prescribed, but will have the option of deviating as necessary in the vicinity of ice areas.

The lines have the option of continuing the use of the Belle Isle Route after November 14 should they wish to do so.

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DISTANCES BETWEEN PORTS ON THE GREAT LAKES

Port Arthur	Duluth	Ashland	Houghton	Marquette	Sault Ste. Marie	Escanaba	Green Bay	Milwaukee	Chicago	Muskegon	Alpena	Bay City	Collingwood	Port Huron	Detroit	Toledo	Cleveland	Erie	Buffalo	Rochester	Oswego	Toronto	Kingston	Ogdensburg	Montreal
1,053	169	143	101	149	237	428	487	540	596	510	356	439	461	471	525	572	618	691	751	839	883	785	899	951	1,053
1,159	93	81	156	227	342	534	593	646	702	616	462	567	567	577	631	679	724	797	857	945	989	891	1,005	1,057	1,159
1,008	179	131	114	185	303	482	554	607	663	576	411	505	528	531	591	638	685	757	818	903	955	851	965	1,017	1,008
955	261	213	84	73	192	394	442	495	552	412	322	394	363	373	427	474	520	593	653	740	785	686	800	852	955
816	384	349	231	159	138	250	250	303	360	288	219	202	202	232	288	335	381	447	507	594	646	754	861	913	816
909	492	440	221	378	219	190	88	175	222	157	119	212	212	247	327	428	474	547	607	694	739	814	906	969	909
969	682	637	509	447	349	201	180	255	337	339	356	354	386	441	494	548	587	660	720	762	852	973	1,022	919	969
1,078	743	698	635	508	414	201	265	320	388	309	463	464	495	540	590	643	693	776	852	908	1,008	1,087	1,178	1,278	1,078
992	808	759	635	532	414	201	265	320	388	309	463	464	495	540	590	643	693	776	852	908	1,008	1,087	1,178	1,278	992
719	587	532	453	391	282	339	407	468	534	439	287	287	320	361	404	444	481	550	629	690	777	873	987	1,089	719
723	532	486	358	297	217	339	407	468	534	439	287	287	320	361	404	444	481	550	629	690	777	873	987	1,089	723
806	531	486	358	297	217	339	407	468	534	439	287	287	320	361	404	444	481	550	629	690	777	873	987	1,089	806
582	505	451	380	313	239	376	445	506	571	533	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	582
528	604	552	430	381	269	438	507	568	633	553	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	528
522	781	680	552	430	381	493	561	622	688	608	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	522
455	833	758	606	545	385	545	614	675	740	640	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	455
373	917	831	743	682	522	629	698	759	824	724	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	373
335	986	924	813	751	592	682	767	828	893	794	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	335
231	1,087	1,041	913	835	692	789	868	929	994	894	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	231
197	1,138	1,091	964	883	743	850	919	980	1,045	945	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	197
234	1,025	979	851	793	630	737	806	867	931	832	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	234
138	1,156	1,110	982	921	761	868	937	998	1,063	963	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	138
104	1,216	1,170	1,042	981	821	928	997	1,058	1,123	1,023	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	104
	1,334	1,288	1,160	1,099	939	1,046	1,115	1,176	1,241	1,141	326	326	358	404	444	481	518	583	652	719	806	906	1,006	1,106	

Distances in Dark Type are in Nautical Miles.

Distances in Light Type are in Statute Miles.

The Great Lakes area is connected with the Atlantic Ocean area by the Junction Point Montreal.

AABENRA, DENMARK. See Abenra.	Egersund, Norway, 273	ACAPULCO, MEXICO
	Emden, Germany, 394	(16°50'30'' N., 99°55'30'' W.) to:
AALBORG, DENMARK	Esbjerg, Denmark, 373	Junction Points*
(57°03'30'' N., 9°56'00'' E.) to:	Hamburg, Germany, 473	Panama, Panama, 1,426
Junction Points*	Kristiansand, Norway, 338	Punta Arenas, Chile, 4,582
Kiel Canal (east end), Germany, 207	Le Havre, France, 522	Ports
Skagens Odde, Denmark, 87	London, England, 429	Amapala, Honduras, 763
Ports	Oostende, Belgium, 406	Antofagasta, Chile, 2,984
Gdynia, Poland (via Store Baelt), 476	Oslo, Norway, 490	Apia, Samoa, 4,638
Gdynia, Poland (via The Sound), 389	Plymouth, England, 638	Arica, Chile, 2,768
Kobenhavn, Denmark, 138	Portland, England, 564	Bahia Magdalena, Mexico, 853
Lubeck, Germany (via Store Baelt), 248	Portsmouth, England, 514	Callao, Peru, 2,198
AARHUS, DENMARK	Rotterdam, Netherlands, 391	Champerico, Guatemala, 494
(56°09'30'' N., 10°13'30'' E.) to:	Southampton, England, 532	Coquimbo, Chile, 3,259
Junction Points*	Stavanger, Norway, 278	Corinto, Nicaragua, 792
Skagens Odde, Denmark, 127	Torshavn, Faeroe Islands, 365	Ensenada, Mexico, 1,369
Kiel Canal (east end), Germany, 131	Wilhelmshaven, Germany, 419	Esmeraldas, Ecuador, 1,527
Ports	Zeebrugge, Belgium, 402	Golfito, Costa Rica, 1,123
Abenra, Denmark, 103	ABIDJAN, IVORY COAST	Guayaquil, Ecuador, 1,708
Kobenhavn, Denmark, 108	(5°19'00'' N., 4°01'50'' W.) to:	Guaymas, Mexico, 958
Oslo, Norway, 255	Junction Points*	Honolulu, Hawaii, U.S.A., 3,289
Szczecin, Poland, 268	Cape of Good Hope, Republic of South Africa, 2,712	Iquique, Chile, 2,834
ABADAN, IRAN	Strait of Gibraltar, 2,656	La Libertad, Mexico, 1,122
(30°19'48'' N., 48°16'30'' E.)	Ports	La Palma, Panama, 1,466
Subtract 30 miles from Al Basrah distances.	Cape Town, Republic of South Africa, 2,679	Los Angeles, California, U.S.A., 1,501
ABENRA, DENMARK	Dakar, Senegal, 1,166	Lota, Chile, 3,573
(55°01'36'' N., 9°25'50'' E.) to:	ABIDJEAN, IVORY COAST. See Abidjan.	Manzanillo, Mexico, 295
Junction Points*	ABO, FINLAND. See Turku.	Mazatlan, Mexico, 595
Kiel Canal (east end), Germany, 66	ABRAHAM BAY, MAYAGUANA ISLAND, BAHAMAS	Mollendo, Peru, 2,643
Skagens Odde, Denmark, 229	(22°19'00'' N., 73°03'20'' W.) to:	Monterey, California, U.S.A., 1,753
Ports	Junction Points*	Pago Pago, American Samoa, 4,595
Aarhus, Denmark, 103	Panama, Panama, 922	Papeete, Society Islands, 3,595
Kobenhavn, Denmark, 204	Straits of Florida, 593	Pedregal, Panama, 1,184
Lubeck, Germany, 131	Ports	Pisco, Peru, 2,309
ABERDEEN, SCOTLAND	New York, New York, U.S.A., 1,115	Puerto Masachapa, Nicaragua, 850
(57°08'30'' N., 2°04'30'' W.) to:	Nuevitas, Cuba, 243	Puerto Somoza, Nicaragua, 825
Junction Points*	San Juan, Puerto Rico, 476	Puntarenas, Costa Rica, 1,011
Skagens Odde, Denmark, 416	ACAJUTLA, EL SALVADOR	Quepos, Costa Rica, 1,043
Ushant, France, 715	(13°35'00'' N., 89°51'00'' W.) to:	Salina Cruz, Mexico, 314
Ports	Junction Points*	San Blas, Mexico, 502
Amsterdam, Netherlands, 380	Panama, Panama, 833	San Diego, California, U.S.A., 1,431
Antwerpen, Belgium, 450	Ports	San Jose, Guatemala, 574
Bergen, Norway, 309	La Libertad, Mexico, 1,739	San Lorenzo, Honduras, 791
Bremerhaven, Germany, 425	San Francisco, California, U.S.A., 2,446	Santa Barbara, California, U.S.A., 1,568
Dunkerque, France, 418		Santa Rosalia, Mexico, 976
		Sasebo, Japan, 6,918
		Talara, Peru, 1,696
		Talcahuano, Chile, 3,558
		Valparaiso, Chile, 3,406
		ACCRA, GHANA
		(5°31'00'' N., 0°12'00'' W.) to:
		Junction Points*
		Straits of Florida (via Northwest Providence Channel), 5,016
		Ports
		Freetown, Sierra Leone, 955

*JUNCTION POINT.—See Preface for use of junction points.

Grand Bassam, Ivory Coast, 230
Lagos, Nigeria, 229
Lobito, Angola, 1,356
Marshall, Liberia, 671
Pointe Noire, Gabon, 952
Porto Grande, Cape Verde Islands,
1,760
Sassandra, Ivory Coast, 362

ADALIA, TURKEY. See Antalya.

AD DAMMAN, SAUDI ARABIA
(26°31'00" N., 50°12'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South
Africa, 4,960
Port Said, U.A.R., 3,142
Singapore, 3,681

Ports

Al Basrah, Iraq, 304
Bombay, India, 1,373

ADELAIDE, AUSTRALIA

(34°50'30" S., 138°30'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,165
Cape of Good Hope, Republic of South
Africa, 5,754
Sunda Strait, Indonesia, 2,980
Wilson Promontory, Australia, 537

Ports

Albany, Australia, 1,024
Bunbury, Australia, 1,260
Durban, Republic of South Africa,
5,160
Melbourne, Australia, 512
Port Louis, Mauritius, 4,368
Port Pirie, Australia, 246
Portland, Australia, 321
Strahan, Australia, 593
Whyalla, Australia, 245

ADEN, ADEN PROTECTORATE
(12°47'40" N., 44°59'00" E.) to:

Junction Points*

Cape Leeuwin, Australia (north of Cha-
gos Archipelago), 4,958
Cape Leeuwin, Australia (south of
Chagos Archipelago), 4,973
Cape of Good Hope, Republic of South
Africa, 3,954
Cape of Good Hope, Republic of South
Africa (low power, May-Septem-
ber), 4,175
Port Said, U.A.R., 1,400

Singapore (October-April), 3,631
Singapore (May-September), 3,646
Sunda Strait, Indonesia (via Eight
Degree Channel, May-September),
3,842
Sunda Strait, Indonesia (via One and
Half Degree Channel, October-
April), 3,838
Torres Strait, Australia (via One and
Half Degree Channel, October-
April), 6,022
Torres Strait, Australia (via Eight
Degree Channel, May-September),
6,034

Ports

Al Aqabah, Jordan, 1,251
Al Basrah, Iraq, 1,979
Al Gurdagah, U.A.R., 1,135
Al Hudaydah, Yemen, 230
Al Mukha, Yemen, 137
Albany, Australia (north of Chagos
Archipelago), 5,127
Albany, Australia (south of Chagos
Archipelago), 5,132
Assab, Ethiopia, 150
Bandar Abbas, Iran, 1,453
Beira, Mozambique, 2,610
Belawan, Indonesia, 3,299
Bhavnagar, India, 1,707
Bombay, India (October-April), 1,657
Bombay, India (May-September),
1,678
Bur Safajah, U.A.R., 1,109
Calcutta, India (south of Socotra,
October-April), 3,308
Calcutta, India (north of Socotra,
May-September), 3,323
Colombo, Ceylon (October-April), 2,-
094
Colombo, Ceylon (May-September),
2,105
Dar es Salaam, Tanganyika, 1,752
Darwin, Australia (via One and Half
Degree Channel, October-April),
5,361
Darwin, Australia (via Eight Degree
Channel, May-September), 5,374
Diego Garcia, Chagos Archipelago, 2,-
116
Djibouti, French Somaliland, 133
Eilat, Israel, 1,247
Fremantle, Australia (north of Cha-
gos Archipelago), 4,921
Hobart, Tasmania, 6,598
Jazireh-ye Khark, Iran, 1,811
Juddah, Saudi Arabia, 707
Karachi, Pakistan, 1,472
Khawr al Ama, Neutral Zone, Persian
Gulf, 1,873
Lourenco Marques, Mozambique, 2,-
973

Madras, India (south of Socotra, Oc-
tober-April), 2,661
Madras, India (north of Socotra,
May-September), 2,676
Malacca, Malaysia, 3,517
Masqat, Mascot and Oman, 1,211
Massaua, Ethiopia, 400
Mina Abd Allah, Kuwait, 1,894
Mina Su'ud, Neutral Zone, Persian
Gulf, 1,875
Mogadiscio, Somali Republic, 1,106
Mombasa, Kenya, 1,619
Penang, Malaysia (south of Socotra),
3,344
Port Louis, Mauritius, 2,341
Port Sudan, Sudan, 668
Rangoon, Burma (south of Socotra,
October-April), 3,318
Rangoon, Burma (north of Socotra,
May-September), 3,333
Ra's al Khafji, Neutral Zone, Persian
Gulf, 1,871
Ra's as Sidr, U.A.R., 1,282
Ra's Gharib, U.A.R., 1,207
Sabang, Indonesia, 3,033
Suakin, Sudan, 631
Tanga, Tanganyika, 1,681
Victoria, Seychelles, 1,416
Wellington, New Zealand (south of
Chagos Archipelago and Tas-
mania), 7,814
Zanzibar, Zanzibar, 1,731

AGADIR, MOROCCO

(30°25'30" N., 9°37'35" W.) to:

Junction Points*

Cape of Good Hope, Republic of South
Africa, 4,719
Ushant, France, 1,136

Ports

Casablanca, Morocco, 257
Dakar, Senegal, 1,109

AHMADI, MINA AL, KUWAIT. See
Mina Al Ahmadi.

AJACCIO, CORSICA

(41°55'40" N., 8°45'07" E.) to:

Junction Points*

Port Said, U.A.R., 1,355
Strait of Gibraltar, 778

Ports

Bayrut, Lebanon, 1,437
Catania Sicily, 464
Civitavecchia, Italy, 180
Genova, Italy, 170
Marseille, France, 188

*JUNCTION POINT.—See Preface for use of junction points.

Nice, France, 138
Toulon, France, 155
Venezia, Italy, 1,507
Villefranche, France, 138
Volos, Greece (Corinth Canal), 1,014
Volos, Greece (south of Greece), 1,056

AKITA, JAPAN

(39°45'30" N., 140°02'00" E.) to:

Ports

Aomori, Japan, 158
Esutoru, U.S.S.R., 596
Hakodate, Japan, 150
Honto, U.S.S.R., 450
Maizuru, Japan, 352
Shimonoseki, Japan, 586

AKKRA, GHANA. See Accra.

AKUREYRI, ICELAND

(65°41'00" N., 18°04'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 702
Strait of Gibraltar, 2,102

Ports

Bergen, Norway, 803
Murmansk, U.S.S.R., 1,256
St. John's, Canada, 1,616

AKYAB, BURMA

(20°08'30" N., 92°54'30" E.) to:

Junction Points*

Port Said, U.A.R., 4,672
Singapore, 1,365

Ports

Calcutta, India, 402
Colombo, Ceylon, 1,225
Penang, Malaysia, 1,215

AL AQABAH, JORDAN

(29°31'15" N., 34°59'55" E.) to:

Junction Points*

Port Said, U.A.R., 380

Ports

Aden, Aden Protectorate, 1,251
Juddah, Saudi Arabia, 573
Massaua, Ethiopia, 897

AL BAHRAYN, BAHRAIN

(26°17'00" N., 50°32'30" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 4,957
Port Said, U.A.R., 3,132
Singapore, 3,652

Ports

Bandar-E Shapur, Iran, 288
Belawan, Indonesia, 3,316
Calcutta, India, 3,355
Darwin, Australia, 5,390
Fremantle, Australia, 5,203
Malacca, Malaysia, 3,534
Penang, Malaysia, 3,361
Rangoon, Burma, 3,329
Sabang, Indonesia, 3,050

AL BASRAH, IRAQ

(30°31'30" N., 47°50'30" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,211
Port Said, U.A.R., 3,371
Singapore, 3,916

Ports

Ad Damman, Saudi Arabia, 304
Aden, Aden Protectorate, 1,979
Bandar Abbas, Iran, 572
Bandar-E Shapur, Iran, 154
Belawan, Indonesia, 3,553
Bombay, India, 1,594
Calcutta, India, 3,593
Colombo, Ceylon, 2,359
Darwin, Australia, 5,650
Dumai, Indonesia, 3,824
Fremantle, Australia, 5,440
Karachi, Pakistan, 1,177
Malacca, Malaysia, 3,771
Masqat, Mascot and Oman, 773
Massaua, Ethiopia, 2,372
Mina al Ahmadi, Kuwait, 140
Penang, Malaysia, 3,598
Rangoon, Burma, 3,603
Ra's at Tannurah, Saudi Arabia, 295
Sabang, Indonesia, 3,287
Umm Said, Qatar, 444

AL FAW, IRAQ

(29°58'45" N., 48°28'36" E.)

Subtract 56 miles from Al Basrah distances.

AL GURDAGAH, UNITED ARAB REPUBLIC

(27°13'25" N., 33°50'50" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,041
Port Said, U.A.R., 278
Singapore, 4,754

Ports

Aden, Aden Protectorate, 1,135

AL HAMMAMAT, TUNISIA

(36°23'00" N., 10°37'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,138
Strait of Gibraltar, 888

Ports

Annaba, Algeria, 234
Tarabulus, Libya, 246
Valletta, Malta, 198

AL HOCEIMA, MOROCCO. See Villa Sanjurjo.

AL HUDAYDAH, YEMEN

(14°47'00" N., 42°53'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 4,137
Port Said, U.A.R., 1,162
Singapore, 3,864

Ports

Aden, Aden Protectorate, 230

AL KHUMS, LIBYA

(32°39'30" N., 14°16'45" E.) to:

Junction Points*

Port Said, U.A.R., 941
Strait of Gibraltar, 1,130

Ports

Banghazi, Libya, 296
Messina, Sicily, 342
Tunis, Tunisia, 359

AL KUWAYT, KUWAIT

(29°24'00" N., 47°58'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,141
Singapore, 3,836

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Belawan, Indonesia, 3,500
 Calcutta, India, 3,504
 Darwin, Australia, 5,597
 Fremantle, Australia, 5,387
 Malacca, Malaysia, 3,718
 Penang, Malaysia, 3,545
 Rangoon, Burma, 3,513
 Sabang, Indonesia, 3,234

AL LADHIQIYAH, SYRIA
 (35°31'40'' N., 35°45'35'' E.) to:

Junction Points*
 Port Said, U.A.R., 310
 Strait of Gibraltar, 2,029

Ports
 Alexandria, U.A.R., 402
 Iraklion, Crete, 527
 Larnaca, Cyprus, 114
 Mersin, Turkey, 94
 Napoli, Italy, 1,191
 Trieste, Free Territory (via Corinth Canal), 1,337
 Trieste, Free Territory (south of Greece), 1,370
 Tunis, Tunisia, 1,258
 Valencia, Spain, 1,765

AL MANAMAH, BAHRAIN ISLAND.
 See Al Bahrayn.

AL MINA AL BAYDAH, SYRIA. See Al Mina Al Bayda.

AL MUKHA, YEMEN
 (13°19'45'' N., 43°12'00'' E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 4,043
 Port Said, U.A.R., 263
 Singapore, 3,756

Ports
 Aden, Aden Protectorate, 137
 Port Sudan, Sudan, 524

ALBANY, AUSTRALIA
 (35°02'40'' S., 117°54'00'' E.) to:

Junction Points*
 Cape Leeuwin, Australia, 168
 Cape of Good Hope, Republic of South Africa, 4,740
 Singapore, 2,525

Ports
 Adelaide, Australia, 1,024
 Aden, Aden Protectorate, 5,127
 Darwin, Australia, 2,152
 Durban, Republic of South Africa, 4,275
 Fremantle, Australia, 349
 Geraldton, Australia, 525
 Hobart, Tasmania, 1,494
 Malacca, Malaysia, 2,602
 Melbourne, Australia, 1,363
 Port Lincoln, Australia, 953
 Port Louis, Mauritius, 3,340
 Rapid Bay, Australia, 990
 Stenhouse Bay, Australia, 936
 Strahan, Australia, 1,356
 Wellington, New Zealand (south of Tasmania), 2,729

ALBANY, NEW YORK, U.S.A.
 (42°37'54'' N., 73°45'18'' W.)

Add 126 miles to New York distances.

ALCUDIA, BALEARIC ISLANDS
 (39°49'00'' N., 3°09'00'' E.) to:

Junction Points*
 Port Said, U.A.R., 1,536
 Strait of Gibraltar, 526

Ports
 Barcelona, Spain, 114
 Marseille, France, 235
 Oran, Algeria, 281

ALEKSANDROVSK, SAKHALIN
 (50°54'00'' N., 142°07'00'' E.) to:

Junction Points*
 Singapore, 3,608
 Sunda Strait, Indonesia, 3,961

Ports
 Bukhta Broutona, Kuril Islands, 747
 Ching-tao, China, 1,602
 Chin-huang-tao, China (via Maenggol Sudo), 1,755
 Chinnampo, Korea, 1,601
 Darwin, Australia, 4,041
 Djakarta, Indonesia, 3,942
 Hakodate, Japan, 631
 Hong Kong, B.C.C., 2,250
 Honolulu, Hawaii, U.S.A., 3,589
 Hisa-men, China, 1,991
 Inchon, Korea (via Maenggol Sudo), 1,507
 Kasatka, Japan, 595
 Kobe, Japan, 1,384

Krung Thep, Thailand (outer bar), 3,639
 Lo-hsing-ta Mao-ti, China, 1,868
 Los Angeles, California, 4,687
 Lu-shun, China, 1,654
 Manila, Philippines, 2,507
 Matsugahama, Japan, 589
 Mokpo, Korea, 1,330
 Moskalvo, U.S.S.R., 230
 Nagasaki, Japan, 1,253
 Nikolayevsk, U.S.S.R., 162
 Osaka, Japan, 1,394
 Pago Pago, American Samoa, 4,765
 Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kuril'skiy and La Perouse Strait), 1,158
 Pusan, Korea, 1,118
 Sai Gon, Vietnam, 3,105
 San Diego, California, 4,779
 San Francisco, California, 4,373
 Seattle, Washington (via La Perouse Strait and Proliv Kruzenshterna), 4,108
 Shang-hai, China, 1,597
 Shan-tou, China, 2,100
 Shelekhovo, Kuril Islands, 934
 Slavnoye, U.S.S.R., 592
 Ta-ku, China, 1,807
 Ta-lien, China (via Maenggol Sudo), 1,648
 Tomari, Japan, 542
 Vladivostok, U.S.S.R., 713
 Wei-hai-wei, China (via Maenggol Sudo), 1,579
 Wonsan, Korea, 972
 Yen-tai, China (via Maenggol Sudo), 1,613
 Yokohama, Japan, 1,143

ALESUND, NORWAY
 (62°28'06'' N., 6°09'27'' E.) to:

Junction Points*
 Skagens Odde, Denmark, 450

Ports
 Bergen, Norway, 167
 London, England, 733
 Reykjavik, Iceland, 848

ALEXANDRETTA, TURKEY.
 See Iskenderun.

ALEXANDRIA, UNITED ARAB REPUBLIC
 (31°10'41'' N., 29°51'28'' E.) to:

Junction Points*
 Port Said, U.A.R., 164
 Strait of Gibraltar, 1,822

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Al Ladhqiyyah, Syria, 402
 Al Mina Al Bayda, Syria, 405
 Alger, Algeria, 1,393
 Alicante, Spain, 1,560
 Ancona, Italy, 1,096
 Annaba, Algeria, 1,169
 Antalya, Turkey, 349
 Ashod Yam, Israel, 266
 Augusta, Sicily, 819
 Banghazi, Libya, 541
 Barcelona, Spain, 1,482
 Bari, Italy, 890
 Bayrut, Lebanon, 341
 Bizerte, Tunisia, 1,064
 Brindisi, Italy, 831
 Cagliari, Sardinia, 1,136
 Cartagena, Spain, 1,585
 Castellamare di Stabia, Italy, 1,003
 Catania, Sicily, 828
 Ceuta, Morocco, 1,802
 Famagusta, Cyprus, 340
 Genova, Italy, 1,316
 Gibraltar, 1,805
 Haifa, Israel, 295
 Iraklion, Crete, 372
 Istanbul, Turkey, 742
 Izmir, Turkey, 547
 La Spezia, Italy, 1,280
 Limassol, Cyprus, 272
 Livorno, Italy, 1,244
 Malaga, Spain, 1,752
 Marseille, France, 1,407
 Messina, Sicily, 834
 Napoli, Italy, 1,005
 Odessa, U.S.S.R., 1090
 Oran, Algeria, 1,590
 Palermo, Sicily, 950
 Palma, Balearic Islands, 1,435
 Paphos, Cyprus, 256
 Piraievs, Greece, 515
 Rijeka, Yugoslavia, 1,166
 Savona, Italy, 1,326
 Sibenik, Yugoslavia, 1,039
 Siracusa, Sicily, 809
 Split, Yugoslavia, 1,024
 Soudha, Crete, 425
 Sur, Lebanon, 309
 Tarabulus, Libya, 866
 Taranto, Italy, 844
 Thessaloniki, Greece, 678
 Toulon, France, 1,376
 Trieste, Free Territory, 1,200
 Tubruq, Libya, 308
 Tunis, Tunisia, 1,051
 Valencia, Spain, 1,559
 Valletta, Malta, 823
 Venezia, Italy, 1,208
 Volos, Greece, 620

ALEXANDROUPOLIS, GREECE
 (40°50'00" N., 25°53'00" E.) to:

Junction Points*
 Port Said, U.A.R., 699
 Strait of Gibraltar, 1,716

Ports
 Istanbul, Turkey, 200
 Thessaloniki, Greece, 191
 Volos, Greece, 205

ALEXANDROVSKI, SAKHALIN
 See Aleksandrovsk.

ALGECIRAS, SPAIN
 (36°07'30" N., 5°26'30" W.) to:

Junction Points*
 Port Said, U.A.R., 1,927
 Strait of Gibraltar, 25

Ports
 Cartagena, Spain, 238
 Oran, Algeria, 229
 Palermo, Sicily, 924

ALGER, ALGERIA
 (36°46'50" N., 3°04'11" E.) to:

Junction Points*
 Port Said, U.A.R., 1,514
 Strait of Gibraltar, 437

Ports
 Alexandria, U.A.R., 1,393
 Alicante, Spain, 198
 Ancona, Italy, 1,153
 Annaba, Algeria, 246
 Arzew, Algeria, 186
 Banghazi, Libya, 927
 Barcelona, Spain, 282
 Bari, Italy, 946
 Batumi, U.S.S.R. (via Corinth Canal), 1,963
 Batumi, U.S.S.R. (south of Greece), 1,980
 Bayrut, Lebanon, 1,605
 Bizerte, Tunisia, 340
 Brindisi, Italy, 888
 Cagliari, Sardinia, 332
 Cannes, France, 446
 Cartagena, Spain, 208
 Ceuta, Morocco, 417
 Genova, Italy, 531
 Ghazaouet, Algeria, 278
 Gibraltar, 420
 Haifa, Israel, 1,602
 Iraklion, Crete, 1,087
 Istanbul, Turkey (via Corinth Canal), 1,376

Istanbul, Turkey (south of Greece), 1,393
 Izmir, Turkey (via Corinth Canal), 1,221
 Izmir, Turkey (south of Greece), 1,238
 Kavala, Greece (via Corinth Canal), 1,260
 Kavala, Greece (south of Greece), 1,277
 La Spezia, Italy, 540
 Livorno, Italy, 528
 Mahon, Balearic Islands, 200
 Malaga, Spain, 368
 Marseille, France, 410
 Messina, Sicily, 621
 Mostaganem, Algeria, 172
 Napoli, Italy, 582
 Odessa, U.S.S.R. (via Corinth Canal), 1,724
 Odessa, U.S.S.R. (south of Greece), 1,741
 Oran, Algeria, 205
 Palermo, Sicily, 513
 Piraievs, Greece (via Corinth Canal), 1,022
 Piraievs, Greece (south of Greece), 1,079
 Rijeka, Yugoslavia, 1,220
 Savona, Italy, 518
 Sibenik, Yugoslavia, 1,094
 Siracusa, Sicily, 626
 Skikda, Algeria, 200
 Split, Yugoslavia, 1,079
 Tarabulus, Libya, 665
 Taranto, Italy, 841
 Thessaloniki, Greece (via Corinth Canal), 1,270
 Thessaloniki, Greece (south of Greece), 1,287
 Toulon, France, 406
 Trieste, Free Territory, 1,254
 Tunis, Tunisia, 392
 Valencia, Spain, 230
 Valletta, Malta, 576
 Venezia, Italy, 1,264
 Volos, Greece (via Corinth Canal), 1,211
 Volos, Greece (south of Greece), 1,228

ALGIERS, ALGERIA. See Alger.

ALICANTE, SPAIN
 (38°20'00" N., 0°29'01" W.) to:

Junction Points*
 Port Said, U.A.R., 1,680
 Strait of Gibraltar, 317

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Alexandria, U.A.R., 1,560
 Alger, Algeria, 198
 Almeria, Spain, 155
 Ancona, Italy, 1,308
 Annaba, Algeria, 419
 Arzew, Algeria, 152
 Banghazi, Libya, 1,094
 Barcelona, Spain, 228
 Bari, Italy, 1,100
 Bayrut, Lebanon, 1,772
 Bizerte, Tunisia, 507
 Brindisi, Italy, 1,042
 Cagliari, Sardinia, 473
 Ceuta, Morocco, 299
 Civitavecchia, Italy, 616
 Genova, Italy, 564
 Ghazaouet, Algeria, 209
 Gibraltar, 300
 Haifa, Israel, 1,769
 Iraklion, Crete, 1,254
 Istanbul, Turkey (via Corinth Canal), 1,540
 Istanbul, Turkey (south of Greece), 1,560
 Izmir, Turkey (via Corinth Canal), 1,386
 Izmir, Turkey (south of Greece), 1,405
 La Spezia, Italy, 588
 Livorno, Italy, 585
 Malaga, Spain, 248
 Marseille, France, 406
 Melilla, Morocco, 224
 Mers el Kebir, Algeria, 160
 Messina, Sicily, 776
 Mostaganem, Algeria, 148
 Napoli, Italy, 723
 Odessa, U.S.S.R. (via Corinth Canal), 1,888
 Odessa, U.S.S.R. (south of Greece), 1,908
 Oran, Algeria, 159
 Palermo, Sicily, 667
 Palma, Balearic Islands, 173
 Piraievs, Greece (via Corinth Canal), 1,186
 Piraievs, Greece (south of Greece), 1,246
 Rijeka, Yugoslavia, 1,375
 Savona, Italy, 549
 Sibenik, Yugoslavia, 1,249
 Siracusa, Sicily, 792
 Split, Yugoslavia, 1,234
 Tarabulus, Libya, 832
 Taranto, Italy, 995
 Thessaloniki, Greece (via Corinth Canal), 1,435
 Thessaloniki, Greece (south of Greece), 1,454
 Toulon, France, 418
 Trieste, Free Territory, 1,409

Tunis, Tunisia, 558
 Valencia, Spain, 98
 Valletta, Malta, 743
 Venezia, Italy, 1,418
 Villa Sanjurjo, Morocco, 260
 Volos, Greece (via Corinth Canal), 1,376
 Volos, Greece (south of Greece), 1,395

ALIWAL, REPUBLIC OF SOUTH AFRICA. See Mosselbaai.

ALMERIA, SPAIN
 (36°49'30" N., 2°27'48" W.) to:

Junction Points*
 Port Said, U.A.R., 1,780
 Strait of Gibraltar, 171

Ports
 Alicante, Spain, 155
 Barcelona, Spain, 371
 Catania, Sicily, 919
 Istanbul, Turkey (via Corinth Canal), 1,642
 Istanbul, Turkey (south of Greece), 1,659
 Kerch, U.S.S.R. (via Corinth Canal), 2,077
 Kerch, U.S.S.R. (south of Greece), 2,094
 Nice, France, 627
 Palma, Balearic Islands, 308
 Sfax, Tunisia, 881

AL MINA AL BAYDA, SYRIA
 (35°36'00" N., 35°45'00" E.) to:

Junction Points*
 Port Said, U.A.R., 314
 Strait of Gibraltar, 2,028

Ports
 Alexandria, U.A.R., 405
 Izmir, Turkey, 626
 Haifa, Israel, 175

ALMIRANTE, PANAMA
 (9°17'12" N., 82°23'32" W.) to:

Junction Points*
 Panama, Panama, 198
 Yucatan Channel, 814

Ports
 Barranquilla, Colombia, 477
 Cienfuegos, Cuba, 788
 Kingston, Jamaica, 657

ALTAGRACIA, VENEZUELA
 (10°42'30" N., 71°32'00" W.)

Subtract 6 miles from Maracaibo distances.

ALVARO OBREGON, MEXICO
 (18°35'30" N., 92°39'30" W.) to:

Junction Points*
 Panama, Panama, 1,361
 Straits of Florida, 678
 Yucatan Channel, 548

Ports
 Apalachicola, Florida, U.S.A., 792
 Belize, British Honduras, 756
 Cap Haitien, Haiti, 1,298
 Cartagena, Colombia, 1,407
 Castries, St. Lucia, 2,000
 Charlotte Amalie, Virgin Islands (north of Hispaniola), 1,726
 Charlotte Amalie, Virgin Islands (south of Hispaniola), 1,747
 Colon, Panama, 1,317
 Galveston, Texas, U.S.A., 665
 Gulfport, Mississippi, U.S.A., 755
 Habana, Cuba, 699
 Key West, Florida, U.S.A., 748
 Kingston, Jamaica, 1,092
 La Guaira, Venezuela, 1,781
 Matagorda Bay, Texas, U.S.A., 621
 Mobile, Alabama, U.S.A., 778
 New Orleans, Louisiana, U.S.A., 755
 Pensacola, Florida, U.S.A., 776
 Pointe a Pitre, Guadeloupe, 1,957
 Port au Prince, Haiti, 1,292
 Port of Spain, Trinidad, 2,060
 Puerto Cabello, Venezuela, 1,745
 San Juan del Norte, Nicaragua, 1,165
 Santo Domingo, Dominican Republic, 1,472
 Tampico, Mexico, 372
 Tuxpan, Mexico, 307
 Veracruz, Mexico, 202
 Willemstad, Curacao, 1,635

AMAGASAKI, JAPAN
 (34°41'00" N., 135°23'00" E.)

Add 4 miles to Osaka for ports outside the Inland Sea.

AMAPALA, HONDURAS
 (13°18'00" N., 87°39'30" W.) to:

Junction Points*
 Panama, Panama, 745

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Acapulco, Mexico, 763
 Antofagasta, Chile, 2,460
 Callao, Peru, 1,665
 Corinto, Nicaragua, 72
 Golfito, Costa Rica, 432
 Guayaquil, Ecuador, 1,167
 Iquique, Chile, 2,303
 Mazatlan, Mexico, 1,350
 Pearl Harbor, Hawaii, U.S.A., 4,045
 Puntarenas, Costa Rica, 329
 San Diego, California, U.S.A., 2,181
 San Francisco, California, U.S.A., 2,586
 San Jose, Guatemala, 204
 Seattle, Washington, U.S.A., 3,361

AMASRA, TURKEY
 (41°45'30'' N., 32°25'00'' E.)

Add 167½ miles to Istanbul distances for ports outside the Black Sea.

AMBARCIK, U.S.S.R.
 (69°38'30'' N., 162°12'00'' E.) to:

Ports
 Pevek, U.S.S.R., 201
 Provideniya, U.S.S.R., 864
 Tiksi, U.S.S.R., 745

AMBOIM, ANGOLA
 (10°43'47'' S., 13°45'00'' E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 1,530
 Strait of Gibraltar, 4,099
 Ushant, France, 4,739

Ports
 Boma, Republic of the Congo, 356
 Cabinda, Cabinda, 339
 Casablanca, Morocco, 3,945

AMBON, INDONESIA
 (3°41'30'' S., 128°10'25'' E.) to:

Junction Points*
 Lombok Strait, Indonesia, 819
 Torres Strait, Australia, 964

Ports
 Darwin, Australia, 579
 Manila, Philippines, 1,260
 Surabaja, Indonesia, 980

AMOY, CHINA. See Hsia-men.

AMSTERDAM, NETHERLANDS
 (52°23'00'' N., 4°54'00'' E.) to:

Junction Points*
 Bishop Rock, England, 481
 Kiel Canal (east end), Germany, 291
 Pentland Firth, Scotland, 481
 Skagens Odde, Denmark, 422
 Ushant, France, 465

Ports
 Aberdeen, Scotland, 380
 Antwerpen, Belgium, 148
 Bergen, Norway, 502
 Bremerhaven, Germany, 223
 Cherbourg, France, 305
 Dover, England, 161
 Dundee, Scotland, 374
 Dunkerque, France, 135
 Egersund, Norway, 380
 Esbjerg, Denmark, 255
 Hamburg, Germany, 274
 Hartlepool, England, 260
 Harwich, England, 145
 Hull, England, 212
 Inverness, Scotland, 482
 Kristiansand, Norway, 381
 Le Havre, France, 273
 Leith, Scotland, 372
 London, England, 208
 Newcastle, England, 286
 Oostende, Belgium, 117
 Oslo, Norway, 522
 Plymouth, England, 390
 Portland, England, 316
 Portsmouth, England, 266
 Rotterdam, Netherlands, 67
 Southampton, England, 284
 Stavanger, Norway, 424
 Wilhelmshaven, Germany, 210
 Zeebrugge, Belgium, 104

AMUAY, VENEZUELA
 (11°44'39'' N., 70°13'56'' W.) to:

Junction Points*
 Panama, Panama, 678
 Yucatan Channel, 1,050

Ports
 Barranquilla, Colombia, 325
 La Guaira, Venezuela, 276
 Santiago de Cuba, Cuba, 600

ANADYR BAY, U.S.S.R. See Anadyr-skiy Liman.

ANADYRSKIY LIMAN, U.S.S.R.
 (64°45'00'' N., 177°30'00'' E.) to:

Ports
 Dutch Harbor, Alaska, U.S.A., 824
 Kiska, Alaska, U.S.A., 804
 Provideniya, U.S.S.R., 254

ANCHORAGE, ALASKA, U.S.A.
 (61°13'00'' N., 149°56'00'' W.) to:

Ports
 San Francisco, California, U.S.A., 1,872
 Seattle, Washington, U.S.A. (via inside route), 1,639
 Seattle, Washington, U.S.A. (via outside route and Juan de Fuca Strait), 1,420

ANCONA, ITALY
 (43°37'22'' N., 13°30'18'' E.) to:

Junction Points*
 Port Said, U.A.R. (via Corinth Canal), 1,196
 Port Said, U.A.R. (south of Greece), 1,206
 Strait of Gibraltar, 1,580

Ports
 Alexandria, U.A.R., 1,096
 Alger, Algeria, 1,153
 Alicante, Spain, 1,308
 Annaba, Algeria, 933
 Banghazi, Libya, 800
 Barcelona, Spain, 1,212
 Bari, Italy, 216
 Barletta, Italy, 199
 Bayrut, Lebanon (via Corinth Canal), 1,245
 Bayrut, Lebanon (south of Greece), 1,276
 Bizerte, Tunisia, 842
 Brindisi, Italy, 274
 Cartagena, Spain, 1,338
 Ceuta, Morocco, 1,561
 Chioggia, Italy, 111
 Genova, Italy, 1,017
 Gibraltar, 1,563
 Haifa, Israel (via Corinth Canal), 1,248
 Haifa, Israel (south of Greece), 1,272
 Iraklion, Crete, 762
 Istanbul, Turkey (via Corinth Canal), 962
 Istanbul, Turkey (south of Greece), 1,058
 Izmir, Turkey (via Corinth Canal), 808

*JUNCTION POINT.—See Preface for use of junction points.

Izmir, Turkey (south of Greece), 904
 La Spezia, Italy, 979
 Livorno, Italy, 946
 Malaga, Spain, 1,510
 Marseille, France, 1,109
 Messina, Sicily, 536
 Monopoli, Italy, 239
 Napoli, Italy, 707
 Odessa, U.S.S.R. (via Corinth Canal), 1,310
 Odessa, U.S.S.R. (south of Greece), 1,407
 Oran, Algeria, 1,349
 Palermo, Sicily, 652
 Palma, Balearic Islands, 1,170
 Piraeus, Greece (via Corinth Canal), 608
 Piraeus, Greece (south of Greece), 745
 Ploce, Yugoslavia, 167
 Porto di Manfredonia, Italy, 195
 Rijeka, Yugoslavia, 112
 Savona, Italy, 1,028
 Shengjin, Albania, 297
 Sibenik, Yugoslavia, 115
 Siracusa, Sicily, 557
 Split, Yugoslavia, 132
 Tarabulus, Libya, 820
 Taranto, Italy, 415
 Thessaloniki, Greece (via Corinth Canal), 857
 Thessaloniki, Greece (south of Greece), 953
 Toulon, France, 1,077
 Trieste, Free Territory, 130
 Tunis, Tunisia, 830
 Valencia, Spain, 1,295
 Valletta, Malta, 634
 Venezia, Italy, 124
 Volos, Greece (via Corinth Canal), 798
 Volos, Greece (south of Greece), 894
 Zadar, Yugoslavia, 87

ANECHO, TOGO

(6°13'15" N., 1°35'35" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 747
 Ushant, France, 3,704

Ports
 Douala, Cameroon, 526
 Monrovia, Liberia, 850

ANGMAGSSALIK, GREENLAND
(65°37'00" N., 37°37'00" W.) to:

Junction Points*
 Bishop Rock, England, 1,369

Inishtrahull, Ireland, 1,069
 Montreal, Canada (direct), 1,870
 Montreal, Canada (via 75 miles off Kap Farvel), 1,904
 Pentland Firth, Scotland, 1,039
 Strait of Gibraltar, 2,162
 Straits of Florida (direct), 3,267
 Straits of Florida (via 75 miles off Kap Farvel), 3,281

Ports
 Argentia, Canada (direct), 1,365
 Argentia, Canada (via 75 miles off Kap Farvel), 1,379
 Arkhangelsk, U.S.S.R., 1,998
 Boston, Massachusetts, U.S.A. (direct), 2,073
 Boston, Massachusetts, U.S.A. (via 75 miles off Kap Farvel), 2,087
 Charleston, South Carolina, U.S.A. (direct), 2,752
 Charleston, South Carolina, U.S.A. (via 75 miles off Kap Farvel), 2,766
 Colon, Panama (direct), 3,879
 Colon, Panama (via 75 miles off Kap Farvel), 3,893
 Godhavn, Greenland (direct), 1,132
 Godhavn, Greenland (via 75 miles off Kap Farvel), 1,257
 Guantanamo, Cuba (direct), 3,215
 Guantanamo, Cuba (via 75 miles off Kap Farvel), 3,229
 Halifax, Canada (direct), 1,722
 Halifax, Canada (via 75 miles off Kap Farvel), 1,736
 Ivigtut, Greenland (direct), 624
 Ivigtut, Greenland (via 75 miles off Kap Farvel), 754
 Julianehaab, Greenland (direct), 531
 Julianehaab, Greenland (via 75 miles off Kap Farvel), 665
 Key West, Florida, U.S.A. (direct), 3,209
 Key West, Florida, U.S.A. (via 75 miles off Kap Farvel), 3,223
 New York, New York, U.S.A. (direct), 2,275
 New York, New York, U.S.A. (via 75 miles off Kap Farvel), 2,290
 Norfolk, Virginia, U.S.A. (direct), 2,458
 Norfolk, Virginia, U.S.A. (via 75 miles off Kap Farvel), 2,472
 Philadelphia, Pennsylvania, U.S.A. (direct), 2,428
 Philadelphia, Pennsylvania, U.S.A. (via 75 miles off Kap Farvel), 2,442
 Portsmouth, New Hampshire, U.S.A. (direct), 2,052
 Portsmouth, New Hampshire, U.S.A. (via 75 miles off Kap Farvel), 2,066
 Reykjavik, Iceland, 418

St. John's, Canada (direct), 1,193
 St. John's, Canada (via 75 miles off Kap Farvel), 1,208
 San Juan, Puerto Rico (direct), 3,061
 San Juan, Puerto Rico (via 75 miles off Kap Farvel), 3,075

ANGO ANGO, REPUBLIC OF THE CONGO
(5°50'30" S., 13°26'00" E.)

Add 27 miles to Boma distances.

ANGRA DOS REIS, BRAZIL
(23°01'00" S., 44°18'42" W.) to:

Junction Points*
 Panama, Panama, 4,527
 Punta Arenas, Chile, 2,212

Ports
 Montevideo, Uruguay, 1,031
 Salvador, Brazil, 902

ANNABA, ALGERIA
(36°54'00" N., 7°46'19" E.) to:

Junction Points*
 Port Said, U.A.R., 1,289
 Strait of Gibraltar, 675

Ports
 Al Hammamat, Tunisia, 234
 Alexandria, U.A.R., 1,169
 Alger, Algeria, 246
 Alicante, Spain, 419
 Ancona, Italy, 933
 Banghazi, Libya, 702
 Barcelona, Spain, 386
 Bari, Italy, 726
 Bayrut, Lebanon, 1,381
 Bejaia, Algeria, 156
 Bizerte, Tunisia, 116
 Brindisi, Italy, 668
 Cartagena, Spain, 440
 Ceuta, Morocco, 656
 Genova, Italy, 458
 Gibraltar, 658
 Golfo di Oristano, Sardinia, 176
 Haifa, Israel, 1,378
 Hyeres, France, 384
 Iraklion, Crete, 863
 Istanbul, Turkey (via Corinth Canal), 1,151
 Istanbul, Turkey (south of Greece), 1,168
 Izmir, Turkey (via Corinth Canal), 997
 Izmir, Turkey (south of Greece), 1,014

*JUNCTION POINT.—See Preface for use of junction points.

La Spezia, Italy, 463
Livorno, Italy, 431
Malaga, Spain, 607
Marseille, France, 409
Messina, Sicily, 401
Napoli, Italy, 388
Odessa, U.S.S.R. (via Corinth Canal), 1,499
Odessa, U.S.S.R. (south of Greece), 1,516
Oran, Algeria, 444
Palermo, Sicily, 292
Palma, Balearic Islands, 307
Piraeus, Greece (via Corinth Canal), 797
Piraeus, Greece (south of Greece), 854
Port St. Louis du Rhone, France, 419
Rijeka, Yugoslavia, 1,000
Savona, Italy, 451
Sibenik, Yugoslavia, 874
Siracusa, Sicily, 401
Sousse, Tunisia, 255
Split, Yugoslavia, 859
Tarabulus, Libya, 440
Taranto, Italy, 620
Thessaloniki, Greece (via Corinth Canal), 1,046
Thessaloniki, Greece (south of Greece), 1,063
Toulon, France, 390
Trieste, Free Territory, 1,034
Tunis, Tunisia, 167
Valencia, Spain, 426
Valletta, Malta, 352
Venezia, Italy, 1,044
Volos, Greece (via Corinth Canal), 987
Volos, Greece (south of Greece), 1,004

ANNA MARIA BAY, MARQUESAS.
See Taio Hae.

ANNAPOLIS, MARYLAND, U.S.A.
(38°59'00" N., 76°28'45" W.)

For ocean distance via the Chesapeake Bay, subtract 20 miles from Baltimore distances. For ocean distances via the C & D Canal, add 20 miles to Baltimore distances.

ANTALYA, TURKEY
(36°52'00" N., 30°46'00" E.) to:

Junction Points*
Port Said, U.A.R., 346
Strait of Gibraltar, 1,822

Ports
Alexandria, U.A.R., 349

Bayrut, Lebanon, 322
Piraeus, Greece, 383

ANTIGUA. See St. Johns, Antigua.

ANTILLA, CUBA
(20°49'30" N., 75°45'00" W.) to:

Junction Points*
Panama, Panama, 887
Straits of Florida, 491

Ports
Baltimore, Maryland, U.S.A. (via Crooked Island Passage), 1,151
Boston, Massachusetts, U.S.A., 1,408
Charleston, South Carolina, U.S.A., 813
Colon, Panama, 844
Key West, Florida, U.S.A., 434
Matanzas, Cuba, 407
New York, New York, U.S.A., 1,226
Philadelphia, Pennsylvania, U.S.A., 1,197
Port Antonio, Jamaica, 288

ANTOFAGASTA, CHILE
(23°39'00" S., 70°25'20" E.) to:

Junction Points*
Panama, Panama, 2,140
Punta Arenas, Chile, 1,996

Ports
Acapulco, Mexico, 2,984
Amapala, Honduras, 2,460
Arica, Chile, 325
Caldera, Chile, 215
Callao, Peru, 813
Chanaral de Las Animas, Chile, 173
Coquimbo, Chile, 396
Corinto, Nicaragua, 2,400
Corral, Chile, 1,000
Esmeraldas, Ecuador, 1,703
Guayaquil, Ecuador, 1,470
Guaymas, Mexico, 3,894
Iquique, Chile, 224
Los Angeles, California, U.S.A., 4,430
Lota, Chile, 828
Matarani, Peru, 423
Mollendo, Peru, 417
Monterey, California, U.S.A., 4,682
Pago Pago, American Samoa, 5,605
Pisco, Peru, 713
Portland, Oregon, U.S.A., 5,383
Puntarenas, Costa Rica, 2,215
Salina Cruz, Mexico, 2,799
San Antonio, Chile, 600
San Blas, Mexico, 3,438
San Diego, California, U.S.A., 4,360

San Francisco, California, U.S.A., 4,762
San Jose, Guatemala, 2,557
San Juan, Peru, 575
Santa Barbara, California, U.S.A., 4,497
Talcahuano, Chile, 802
Valparaiso, Chile, 576

ANTSIRANA, MALAGASY
REPUBLIC
(12°16'00" S., 49°17'40" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,363
Port Said, U.A.R., 3,240
Singapore, 3,554
Sunda Strait, Indonesia, 3,366

Ports
Beira, Mozambique, 1,003
Belawan, Indonesia, 3,221
Bombay, India, 2,338
Darwin, Australia (via north of Scott Reef), 4,769
Djibouti, French Somaliland, 1,969
Durban, Republic of South Africa, 1,592
Fremantle, Australia, 3,826
Lourenco Marques, Mozambique, 1,313
Malacca, Malaysia, 3,439
Mocambique, Mozambique, 570
Penang, Malaysia, 3,266
Sabang, Indonesia, 2,955

AN-TUNG/SINUIJU, KOREA
(40°06'15" N., 124°23'00" E.)

Add 22½ miles to Tasa Do distances.

ANTWERP, BELGIUM. See
Antwerpen.

ANTWERPEN, BELGIUM
(51°14'00" N., 4°24'00" E.) to:

Junction Points*
Bishop Rock, England, 449
Kiel Canal (east end), Germany, 398
Pentland Firth, Scotland, 553
Skagens Odde, Denmark, 528
Ushant, France, 441

Ports
Aberdeen, Scotland, 450
Amsterdam, Netherlands, 148
Belfast, Ireland, 722

*JUNCTION POINT.—See Preface for use of junction points.

Bergen, Norway, 602
 Bremerhaven, Germany, 333
 Cherbourg, France, 281
 Dover, England, 137
 Dundee, Scotland, 442
 Dunkerque, France, 102
 Egersund, Norway, 484
 Emden, Germany, 276
 Esbjerg, Denmark, 362
 Hamburg, Germany, 382
 Hartlepool, England, 325
 Harwich, England, 97
 Hull, England, 265
 Inverness, Scotland, 554
 Kristiansand, Norway, 488
 Le Havre, France, 244
 Leith, Scotland, 453
 Liverpool, England, 698
 London, England, 193
 Narvik, Norway, 1,211
 Newcastle, England, 351
 Oostende, Belgium, 79
 Oslo, Norway, 630
 Plymouth, England, 366
 Portland, England, 292
 Portsmouth, England, 242
 Rotterdam, Netherlands, 121
 Southampton, England, 260
 Stavanger, Norway, 525
 Wilhelmshaven, Germany, 324
 Zeebrugge, Belgium, 64

AOMORI, JAPAN

(40°50'10" N., 140°44'30" E.) to:

Ports

Akita, Japan, 158
 Bukhta Broutona, Kuril Islands, 664
 Kasatka, Japan, 441
 Komatsushima, Japan, 813
 Matsugahama, Japan, 350
 Pago Pago, American Samoa, 4,358
 Shelekhovo, Kuril Islands, 899
 Shiogama, Japan, 311
 Slavnoye, Kuril Islands, 501
 Tomari, Japan, 335

AO PHUKET, THAILAND

(7°50'00" N., 98°26'00" E.) to:

Junction Points*

Port Said, U.A.R., 4,629
 Singapore, 538

Ports

Calcutta, India, 1,124
 Colombo, Ceylon, 1,192
 Penang, Malaysia, 187

APALACHICOLA, FLORIDA, U.S.A.
 (29°37'00" N., 85°02'00" W.) to:

Junction Points*

Panama, Panama, 1,330
 Yucatan Channel, 474

Ports

Alvaro Obregon, Mexico, 792
 Belize, British Honduras, 788
 Carmen, Mexico, 756
 Cartagena, Colombia, 1,366
 Colon, Panama, 1,287
 Habana, Cuba, 426
 Tampico, Mexico, 825
 Tuxpan, Mexico, 843
 Veracruz, Mexico, 872

APIA, SAMOA

(13°49'00" S., 171°45'30" W.) to:

Junction Points*

Panama, Panama, 5,710
 Punta Arenas, Chile, 5,207
 Torres Strait, Australia (via Raine
 Island entrance), 2,763

Ports

Acapulco, Mexico, 4,638
 Apra, Guam, 3,080
 Auckland, New Zealand, 1,581
 Avarua, Cook Islands, 819
 Brisbane, Australia, 2,177
 Callao, Peru, 5,492
 Christmas Island, North Pacific, 1,274
 Enderbury Island, Phoenix Islands,
 641
 Funafuti Island, Ellice Islands, 632
 Hakodate, Japan, 4,252
 Hobart, Tasmania, 2,776
 Hong Kong, B.C.C., 4,869
 Honolulu, Hawaii, U.S.A., 2,260
 Johnston Island, 1,838
 Lele, Caroline Islands, 1,894
 Levuka, Fiji Islands, 600
 Los Angeles, California, U.S.A., 4,181
 Malakal, Palau Islands, 3,446
 Melbourne, Australia, 2,834
 Midway Island, 2,546
 Nagasaki, Japan, 4,414
 Nonouti, Gilbert Islands, 1,136
 Noumea, New Caledonia, 1,371
 Nukualofa, Tonga Islands, 508
 Omura, Bonin Islands, 3,641
 Pago Pago, American Samoa, 80
 Papeete, Society Islands, 1,301
 Petropavlovsk, U.S.S.R., 4,292
 Ponape, Caroline Islands, 2,189
 Rabaul, New Britain, 2,232
 Raoul Island, Kermadec Islands,
 1,008
 Rotoava, Tuamotu Archipelago, 1,520

Salina Cruz, Mexico, 4,886
 San Diego, California, U.S.A., 4,195
 San Francisco, California, U.S.A.,
 4,161
 Seattle, Washington, U.S.A., 4,613
 Selwyn Bay, Solomon Islands, 1,582
 Shang-hai, China, 4,715
 Suva, Fiji Islands, 647
 Sydney, Australia, 2,355
 Taio-Hae, Marquesas, 1,886
 Talomaco, New Hebrides, 1,255
 Vancouver, Canada, 4,675
 Valparaiso, Chile, 5,453
 Wellington, New Zealand, 1,872
 Yap, Caroline Islands, 3,303
 Yokohama, Japan, 4,057

APRA, GUAM, MARIANA ISLANDS

(13°27'00" N., 144°37'00" E.) to:

Junction Points*

Panama, Panama, 7,988
 Punta Arenas, Chile, 8,144
 Singapore (via Sulu Sea), 2,585

Ports

Apia, Samoa, 3,080
 Auckland, New Zealand, 3,497
 Avarua, Cook Islands, 3,889
 Baie du Controleur, Marquesas, 4,703
 Barbers Point, Hawaii, U.S.A., 3,303
 Bikini, Marshalls, 1,263
 Brisbane, Australia, 2,659
 Callao, Peru, 8,372
 Canton, Phoenix Islands, 2,789
 Cebu, Philippines, 1,344
 Chimbote, Peru, 8,264
 Chimu Wan, Ryukyu Islands, 1,228
 Ching-tao, China, 1,900
 Christmas Island, North Pacific, 3,518
 Darwin, Australia (via Selat Sele),
 1,925
 Djakarta, Indonesia (via Makassar
 Strait), 2,639
 Dutch Harbor, Alaska, U.S.A., 3,403
 Enderbury Island, Phoenix Islands,
 2,827
 Eniwetok, Marshall Islands, 1,066
 Funafuti Island, Ellice Islands, 2,455
 Guayaquil, Ecuador, 8,147
 Hai-kou, Hai-nan Tao, 2,015
 Hakodate, Japan, 1,739
 Hobart, Tasmania, 3,683
 Hong Kong, B.C.C., 1,822
 Honolulu, Hawaii, U.S.A., 3,318
 Hsia-men, China, 1,669
 Iloilo, Philippines, 1,366
 Inchon, Korea (via Tokara Kaikyo),
 1,837
 Iwakuni, Japan, 1,437
 Johnston Island, 2,665

*JUNCTION POINT.—See Preface for use of junction points.

Kaneohe Bay, Hawaii, U.S.A., 3,354
 Kiska, Alaska, U.S.A., 2,822
 Kobe, Japan, 1,386
 Kodiak, Alaska, U.S.A., 3,928
 Kuang-chou, China, 1,905
 Kure, Japan, 1,460
 Kwajalein, Marshalls, 1,322
 Lae, New Guinea, 1,315
 Lele, Caroline Islands, 1,206
 Levuka, Fiji Islands, 2,847
 Lo-hsing-ta Mao-ti, China, 1,617
 Lu-shun, China (via Tokara Kaikyo), 1,976
 Malakal, Palau Islands, 706
 Manila, Philippines (north of Luzon), 1,742
 Manila, Philippines (via San Bernardino Strait), 1,499
 Melbourne, Australia, 3,631
 Midway Island, 2,301
 Nagasaki, Japan, 1,445
 Nagoya, Japan, 1,378
 Naha, Ryukyu Islands, 1,236
 Nakagusuku, Ryukyu Islands, 1,216
 Nandi Bay, Fiji Islands, 2,886
 Nome, Alaska, U.S.A., 3,686
 Nonouti, Gilbert Islands, 1,981
 Noumea, New Caledonia, 2,528
 Nukualofa, Tonga Islands, 3,202
 Olongapo, Philippines (north of Luzon), 1,663
 Omura, Bonin Islands, 834
 Pago Pago, American Samoa, 3,156
 Palmyra Island, 3,194
 Papeete, Society Islands, 4,335
 Petropavlovsk, U.S.S.R., 2,475
 Ponape, Caroline Islands, 906
 Prince Rupert, Canada, 4,586
 Rabaul, New Britain, 1,187
 Raoul Island, Kermadec Islands, 3,369
 Rongelap, Marshall Islands, 1,341
 Rotoava, Tuamotu Archipelago, 4,513
 Sai Gon, Vietnam, 2,304
 San Diego, California, U.S.A., 5,379
 San Francisco, California, U.S.A., 5,053
 Seattle, Washington, U.S.A., 4,948
 Selwyn Bay, Solomon Islands, 1,762
 Semarang, Indonesia, 2,464
 Seward, Alaska, U.S.A., 4,079
 Shang-hai, China, 1,687
 Shan-tou, China, 1,702
 Shimizu, Honshu, Japan, 1,351
 Shimonoseki, Japan, 1,451
 Sitka, Alaska, U.S.A., 4,407
 Sorong, West New Guinea, 1,171
 Sukarnopura, West New Guinea, 1,010
 Surabaya, Indonesia, 2,334
 Suva, Fiji Islands, 2,784
 Sydney, Australia, 3,006
 Taio Hae, Marquesas, 4,698
 Ta-ku, China, 2,133

Ta-lien, China, 1,974
 Talomako, New Hebrides, 2,177
 Tan-shui, Taiwan, 1,505
 Teluk Kau, Halmahera, 1,231
 Tinian, Mariana Islands, 127
 Tokuyama, Japan, 1,427
 Truk, Caroline Islands, 590
 Valparaiso, Chile, 8,510
 Vinh Cam Ranh, Vietnam, 2,112
 Vladivostok, U.S.S.R. (via Shimonoseki Kaikyo), 2,019
 Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 2,155
 Wake Island, 1,334
 Wei-hae-wei, China (via Tokara Kaikyo), 1,901
 Wotho, Marshalls, 1,294
 Wotje Island, Marshall Islands, 1,547
 Yap, Caroline Islands, 458
 Yen-tai, China (via Tokara Kaikyo), 1,935
 Yokkaichi, Japan, 1,364
 Yokohama, Japan, 1,352
 Zamboanga, Philippines (south of Mindanao), 1,467
 Zamboanga, Philippines (via Surigao Strait), 1,484

AQABA, JORDAN. See Al Aqabah.

ARCHANGEL, U.S.S.R. See Arkhangelsk.

ARCHIPIELAGO DE COLON
 (0°53'30'' S., 89°36'30'' W.) to:

Junction Points*
 Panama, Panama, 864

Ports
 Callao, Peru, 1,004
 Guayaquil, Ecuador, 656
 Honolulu, Hawaii, U.S.A., 4,216
 Isla de Pascua, 1,947
 Los Angeles, California, U.S.A., 2,634
 San Diego, California, U.S.A., 2,594
 San Francisco, California, U.S.A., 2,994
 Seattle, Washington, U.S.A., 3,774

ARDROSSAN, SCOTLAND
 (55°38'30'' N., 4°49'30'' W.) to:

Junction Points*
 Bishop Rock, England, 350
 Fastnet, Ireland, 348
 Inishtrahull, Ireland, 95
 Pentland Firth, Scotland, 282

Ports
 Dublin, Ireland, 153
 Glasgow, Scotland, 43
 Liverpool, England, 180

ARENDAL, NORWAY
 (58°27'30'' N., 8°46'30'' E.) to:

Junction Points*
 Pentland Firth, Scotland, 452

Ports
 Bergen, Norway, 254
 London, England, 551
 Oslo, Norway, 120

ARGENTIA, CANADA
 (47°18'00'' N., 53°59'00'' W.) to:

Junction Points*
 Bishop Rock, England, 1,949
 Cape of Good Hope, Republic of South Africa, 6,294
 Fastnet, Ireland, 1,819
 Inishtrahull, Ireland, 1,874
 Montreal, Canada, 943
 Pentland Firth, Scotland, 2,012
 Strait of Gibraltar, 2,302
 Straits of Florida, 2,011

Ports
 Angmagssalik, Greenland (direct), 1,365
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,379
 Arkhangelsk, U.S.S.R., 3,306
 Boston, Massachusetts, U.S.A., 801
 Charleston, South Carolina, U.S.A., 1,489
 Colon, Panama, 2,640
 Guantanamo, Cuba, 1,976
 Halifax, Canada, 448
 Ivigtut, Greenland, 1,023
 Key West, Florida, U.S.A., 1,953
 Lisboa, Portugal (track F), 2,081
 New York, New York, U.S.A., 1,009
 Norfolk, Virginia, U.S.A., 1,189
 Philadelphia, Pennsylvania, U.S.A., 1,159
 Portsmouth, New Hampshire, U.S.A., 779
 Reykjavik, Iceland, 1,584
 San Juan, Puerto Rico, 1,840

ARHUS, DENMARK. See Aarhus.

ARICA, CHILE
 (18°28'00'' S., 70°20'00'' W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*

Panama, Panama, 1,921
Punta Arenas, Chile, 2,301

Ports

Acapulco, Mexico, 2,768
Antofagasta, Chile, 325
Caldera, Chile, 522
Callao, Peru, 593
Chanaral de Las Animas, Chile, 478
Coquimbo, Chile, 702
Corinto, Nicaragua, 1,711
Corral, Chile, 1,305
Esmeraldes, Ecuador, 1,484
Guayaquil, Ecuador, 1,251
Guaymas, Mexico, 3,681
Iquique, Chile, 110
Los Angeles, California, U.S.A., 4,219
Lota, Chile, 1,134
Mollendo, Peru, 137
Monterey, California, U.S.A., 4,471
Pisco, Peru, 492
Puntarenas, Costa Rica, 1,996
Salina Cruz, Mexico, 2,579
San Blas, Mexico, 3,225
San Diego, California, U.S.A., 4,149
San Francisco, California, U.S.A., 4,551
San Jose, Guatemala, 2,338
Santa Barbara, California, U.S.A., 4,286
Talara, Peru, 1,103
Talcahuano, Chile, 1,108
Valparaiso, Chile, 882

ARKHANGELSK, U.S.S.R.

(64°32'00" N., 40°31'00" E.) to:

Junction Points*

Bishop Rock, England, 2,263
Inishtrahull, Ireland, 1,900
Pentland Firth, Scotland, 1,663
Strait of Gibraltar, 3,225
Straits of Florida, 5,208

Ports

Angmagssalik, Greenland, 1,998
Argentia, Canada, 3,306
Berlevag, Norway, 540
Boston, Massachusetts, U.S.A., 4,014
Charleston, South Carolina, U.S.A., 4,692
Colon, Panama, 5,820
Dikson Harbor, U.S.S.R., 1,105
Frederikshavn, Denmark, 1,805
Guantanamo, Cuba, 5,156
Halifax, Canada, 3,663
Hull, England, 1,926
Iokanga, U.S.S.R., 271
Ivigut, Greenland (direct), 2,573

Ivigut, Greenland (via 75 miles off Kap Farvel), 2,683
Key West, Florida, U.S.A., 5,150
Liverpool, England, 2,075
London, England, 2,061
Longyearbyen, Svalbard, 1,051
Mys Chelyuskin, U.S.S.R., 1,469
New York, New York, U.S.A., 4,216
New York, New York, U.S.A. (clear of general maximum winter solid pack ice in vicinity of Iceland), 4,320
Norfolk, Virginia, U.S.A., 4,399
Philadelphia, Pennsylvania, U.S.A., 4,369
Portsmouth, New Hampshire, U.S.A., 3,992
Reykjavik, Iceland (direct), 1,874
Reykjavik, Iceland (south of Iceland), 1,901
San Juan, Puerto Rico, 5,001
Sondre Honningsvag, Norway, 612

ARUBA, NETHERLANDS WEST INDIES. See Sint Nicolaas, and Paarden Baai.

ARZEW, ALGERIA

(35°51'30" N., 0°18'00" W.) to:

Junction Points*

Port Said, U.A.R., 1,692
Strait of Gibraltar, 275

Ports

Alger, Algeria, 186
Alicante, Spain, 152
Bejaia, Algeria, 294
Melilla, Morocco, 146

ASCENSION ISLAND. See Clarence Bay.

ASHDOD YAM, ISRAEL

(31°51'00" N., 34°39'00" E.) to:

Junction Points*

Port Said, U.A.R., 126
Strait of Gibraltar, 2,031

Ports

Alexandria, U.A.R., 266
Bayrut, Lebanon, 136
Famagusta, Cyprus, 203
Fethiye, Turkey, 416
Izmir, Turkey, 668

ASSAB, ETHIOPIA

(13°00'00" N., 42°45'30" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 4,056
Port Said, U.A.R., 1,258
Singapore, 3,769

Ports

Aden, Aden Protectorate, 150
Port Sudan, Sudan, 524

ASSENS, DENMARK

(55°16'15" N., 9°53'07" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 65
Skagens Odde, Denmark, 187

Ports

Goteborg, Sweden, 197
Gdansk, Poland, 370
Lubeck, Germany, 127

AS SUWAYS, UNITED ARAB REPUBLIC. See Bur Ibrahim.

AS SUKHAYRAH, TUNISIA

(34°18'00" N., 10°09'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,156
Strait of Gibraltar, 1,072

Ports

Banghazi, Libya, 523
Messina, Sicily, 406
Tunis, Tunisia, 301

ASTORIA, OREGON, U.S.A.

(46°11'40" N., 123°50'00" W.)

Subtract 83 miles from Portland distances.

ATHENS, GREECE. See Piraeus.

ATTALAE, TURKEY. See Antalya.

ATTU ISLAND, ALASKA, U.S.A.

(52°55'00" N., 173°00'00" E.) to:

Ports

Bukhta Broutona, Kuril Islands, 869
Kasatka, Japan, 1,106
Matsugahama, Japan, 1,179
San Francisco, California, U.S.A. (via Amukta Pass), 2,765

*JUNCTION POINT.—See Preface for use of junction points.

Seattle, Washington, U.S.A. (via Unimak Pass), 2,422
 Shelekhovo, Kuril Islands, 675
 Slavnoye, Kuril Islands, 1,053
 Tomari, Japan, 1,238

AUCKLAND, NEW ZEALAND
 (36°50'00" S., 174°47'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 3,029
 Panama, Panama, 6,516
 Punta Arenas, Chile (via Lat. 49° S.), 4,814
 Punta Arenas, Chile (via Lat. 30° S.), 6,132
 Torres Strait, Australia (via Raine Island entrance), 2,485
 Wilson Promontory, Australia, 1,503

Ports

Apia, Samoa, 1,581
 Apra, Guam, 3,497
 Avarua, Cook Islands, 1,631
 Brisbane, Australia, 1,340
 Callao, Peru, 5,834
 Ching-tao, China, 5,378
 Dutch Harbor, Alaska, U.S.A., 5,578
 Fanning Island, 2,854
 Guayaquil, Ecuador, 6,087
 Hakodate, Japan, 5,104
 Hobart, Tasmania, 1,521
 Hong Kong, B.C.C., 5,060
 Honolulu, Hawaii, U.S.A., 3,820
 Hsia-men, China, 4,990
 Jaluit, Marshall Islands, 2,595
 Kobe, Japan, 4,875
 Kodiak, Alaska, U.S.A., 5,942
 Levuka, Fiji Islands, 1,175
 Los Angeles, California, U.S.A., 5,658
 Melbourne, Australia, 1,649
 Midway Island, 3,937
 Nagasaki, Japan (via Tanegashima Kaikyo and Koshiki Kaikyo), 4,930
 Nagasaki, Japan (via Tokara Kaikyo), 4,963
 Nandi Bay, Fiji Islands, 1,224
 Nelson, New Zealand, 633
 Nome, Alaska, U.S.A., 6,159
 Noumea, New Caledonia, 998
 Nukualofa, Tonga Islands, 1,009
 Omura, Bonin Islands, 4,366
 Pago Pago, American Samoa, 1,565
 Palmyra Island, 2,875
 Papeete, Society Islands, 2,216
 Petropavlovsk, 5,466
 Ponape, Caroline Islands, 2,813
 Portland, Oregon, U.S.A., 6,075
 Prince Rupert, Canada, 6,209
 Rabaul, New Britain, 2,345
 Raoul Island, Kermadec Islands, 592

San Diego, California, U.S.A., 5,655
 San Francisco, California, U.S.A., 5,680
 Seattle, Washington, U.S.A., 6,170
 Seward, Alaska, U.S.A., 6,093
 Shang-hai, China (via Vitiaz Strait), 5,149
 Shang-hai, China (west of New Ireland), 5,148
 Shimonoseki, Japan, 4,944
 Sitka, Alaska, U.S.A., 6,176
 Suva, Fiji Islands, 1,149
 Sydney, Australia, 1,280
 Ta-ku, China, 5,648
 Ta-lien, China (west of New Ireland), 5,469
 Ta-lien, China (via Vitiaz Strait), 5,489
 Talomako, New Hebrides, 1,420
 Truk, Caroline Islands, 3,000
 Valparaiso, Chile, 5,247
 Vancouver, Canada, 6,191
 Vladivostok, U.S.S.R., 5,516
 Wake Island, 3,409
 Wellington, New Zealand, 563
 Yin-hsien, China, 5,077
 Yokohama, Japan, 4,789

AUGUSTA, SICILY

(37°13'36" N., 15°12'55" E.) to:

Junction Points*

Port Said, U.A.R., 932
 Strait of Gibraltar, 1,065

Ports

Alexandria, U.A.R., 819
 Baniyas, Syria, 1,028
 Palermo, Sicily, 187
 Sete, France, 703
 Taranto, Italy, 243
 Valencia, Spain, 801
 Valletta, Malta, 98

AUX CAYES, HAITI. See Les Cayes.

AVARUA, COOK ISLANDS

(21°11'30" S., 159°46'00" W.) to:

Junction Points*

Panama, Panama, 5,092
 Punta Arenas, Chile, 4,429

Ports

Apia, Samoa, 819
 Apra, Guam, 3,889
 Auckland, New Zealand, 1,631
 Brisbane, Australia (via Howe Channel and Main Channel), 2,618

Callao, Peru, 4,733
 Hakodate, Japan, 5,022
 Hobart, Tasmania, 2,962
 Hong Kong B.C.C., 5,674
 Honolulu, Hawaii, U.S.A., 2,553
 Levuka, Fiji Islands, 1,268
 Los Angeles, California, U.S.A., 4,064
 Melbourne, Australia (via South Channel), 3,090
 Midway Island, 3,140
 Nagasaki, Japan, 5,219
 Noumea, New Caledonia, 1,887
 Omura, Bonin Islands, 4,448
 Pago Pago, American Samoa, 750
 Papeete, Society Islands, 618
 Petropavlovsk, U.S.S.R., 4,951
 Ponape, Caroline Islands, 3,001
 Rabaul, New Britain, 2,993
 San Francisco, California, U.S.A., 4,124
 Seattle, Washington, U.S.A., 4,700
 Shang-hai, China, 5,533
 Suva, Fiji Islands (via Oneata Passage), 1,256
 Sydney, Australia, 2,690
 Valparaiso, Chile, 4,632
 Wellington, New Zealand, 1,804
 Yokohama, Japan, 4,849

AVILES, SPAIN

(43°45'00" N., 5°55'00" W.) to:

Junction Points*

Strait of Gibraltar, 722
 Ushant, France, 307

Ports

Bordeaux, France, 303
 El Ferrol del Caudillo, Spain, 133
 St. Nazaire, France, 274

AVONMOUTH, ENGLAND

(51°30'30" N., 2°43'00" W.) to:

Junction Points*

Bishop Rock, England, 191
 Fastnet, Ireland, 202
 Pentland Firth, Scotland, 624

Ports

Barrow in Furness, England, 288
 Belfast, Ireland, 308
 Dublin, Ireland, 220
 Fishguard, Wales, 145
 Glasgow, Scotland, 390
 Holyhead, Wales, 217
 Liverpool, England, 282
 Londonderry, Ireland, 384

BACHAQUERO, VENEZUELA

(9°56'45" N., 71°09'00" W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Add 124 miles to Maracaibo distances.

BAHIA, BRAZIL. See Salvador.

BAHIA BLANCA, ARGENTINA
(38°47'45" S., 62°16'00" W.) to:

Junction Points*
Panama, Panama, 5,776
Punta Arenas, Chile, 1,004

Ports
Baltimore, Maryland, U.S.A., 6,228
Boston, Massachusetts, U.S.A., 6,125
Buenos Aires, Argentina, 564
Montevideo, Uruguay, 466
New York, New York, U.S.A., 6,154
Philadelphia, Pennsylvania, U.S.A., 6,201
Santos, Brazil, 1,292

BAHIA DE SAMANA, DOMINICAN
REPUBLIC
(19°10'00" N., 69°13'00" W.) to:

Junction Points*
Panama, Panama, 1,015
Straits of Florida, 864

Ports
New York, New York, U.S.A., 1,328
Nuevitas, Cuba, 510
San Juan, Puerto Rico, 185

BAHIA HONDA, CUBA
(22°57'20" N., 83°10'30" W.) to:

Ports
Guantanamo, Cuba (via Old Bahama
Channel and Windward Passage),
643
Guantanamo, Cuba (via west end of
Cuba), 723
New York, New York, U.S.A. (via out-
side route), 1,226

BAHIA MAGDALENA, MEXICO
(24°38'00" N., 112°08'00" W.) to:

Junction Points*
Panama, Panama, 2,265

Ports
Acapulco, Mexico, 853
Callao, Peru, 3,008
Honolulu, Hawaii, U.S.A., 2,543
San Diego, California, U.S.A., 600
San Francisco, California, U.S.A., 1,002

BAHIA NIPE, CUBA. See Antilla.

BAHREIN, BAHRAIN. See Al Ba-
hrayn.

BAIE DE CAM RANH, VIETNAM.
See Vinh Cam Ranh.

BAIE DU CONTROLEUR, MARQUE-
SAS
(8°54'00" S., 140°02'00" W.) to:

Junction Points*
Panama, Panama, 3,823

Ports
Apra, Guam, 4,703
Guayaquil, Ecuador, 3,656
Honolulu, Hawaii, U.S.A., 2,111
Midway Island, 3,124
Pago Pago, American Samoa, 1,835
Palmyra Island, 1,608
Papeete, Society Islands, 765
San Diego, California, U.S.A., 2,828
San Francisco, California, U.S.A., 2,986
Seattle, Washington, U.S.A., 3,666
Suva, Fiji Islands, 2,496
Truk, Caroline Islands, 4,199
Valparaiso, Chile, 4,029
Wake Island, 3,589

BAJO GRANDE, VENEZUELA
(10°30'30" N., 71°36'00" W.)

Add 8 miles to Maracaibo distances.

BAKER ISLAND, NORTH PACIFIC
(0°13'30" N., 176°28'00" W.) to:

Ports
Howland Island, 37
Noumea, New Caledonia, 1,707
Suva, Fiji Islands, 1,202
Sydney, Australia, 2,752

BAKLAI HARBOR CHINA. See
Chang-Kan.

BAKLI BAY, CHINA. See Chang-
Kan.

BALBOA, CANAL ZONE
(8°57'30" N., 79°34'15" W.)

See Panama, Panama, to which add
5 miles for Pacific Ocean distances,
and from which subtract 5 miles for
Atlantic Ocean distances.

BALIKPAPAN, BORNEO
(1°16'00" S., 116°48'30" E.) to:

Junction Points*
Lombok Strait, Indonesia, 472
Singapore (via Selat Riouw), 1,053
Sunda Strait, Indonesia, 837
Wetar Passage, Indonesia, 870

Ports
Belawan, Indonesia, 1,422
Manila, Philippines, 1,057
Mokpo, Korea, 2,308

BALTIMORE, MARYLAND, U.S.A.
(39°16'00" N., 76°34'30" W.) to:

Junction Points*
Bishop Rock, England (track A), 3,324
Bishop Rock, England (track B), 3,290
Bishop Rock, England (track C), 3,230
Cape of Good Hope, Republic of South
Africa, 6,924
Fastnet, Ireland (track A), 3,230
Fastnet, Ireland (track B), 3,193
Fastnet, Ireland (track C), 3,123
Inishtrahull, Ireland (track A), 3,356
Inishtrahull, Ireland (track B), 3,312
Inishtrahull, Ireland (track C), 3,221
Montreal, Canada (via Strait of Can-
so), 1,769
Panama, Panama, 1,944
Pentland Firth, Scotland (track A),
3,570
Pentland Firth, Scotland (track B),
3,516
Pentland Firth, Scotland (track C),
3,401
Punta Arenas, Chile, 7,021
Strait of Gibraltar (track A), 3,478
Strait of Gibraltar (track B), 3,470
Strait of Gibraltar (track C), 3,466
Straits of Florida, 1,102

Ports
Antilla, Cuba, 1,151
Bahia Blanca, Argentina, 6,228
Banes, Cuba, 1,140
Baracoa, Cuba, 1,153
Belem, Brazil, 2,953
Belize, British Honduras (via Straits
of Florida), 1,625
Bluefields, Nicaragua, 1,928
Bocas del Toro, Panama (via Crooked
Island Passage and Windward Pas-
sage), 1,975

*JUNCTION POINT.—See Preface for use of junction points.

Bordeaux, France (track A), 3,616
 Bordeaux, France (track B), 3,587
 Bordeaux, France (track C), 3,544
 Brest, France (track A), 3,406
 Brest, France (track B), 3,375
 Brest, France (track C), 3,321
 Bridgetown, Barbados, 1,853
 Buenos Aires, Argentina, 5,945
 Cadiz, Spain (track C), 3,434
 Cap Haitien, Haiti, 1,227
 Cape Town, Republic of South Africa, 6,912
 Castries, St. Lucia, 1,741
 Cayenne, French Guiana, 2,468
 Charlotte Amalie, Virgin Islands, 1,417
 Charlottetown, Canada, 1,134
 Cienfuegos, Cuba (via Windward Passage), 1,589
 Colon, Panama (via Crooked Island Passage and Windward Passage), 1,901
 Fort de France, Martinique, 1,718
 Frederikshaab, Greenland, 2,261
 Funchal, Madeira Island, 3,028
 Georgetown, British Guiana, 2,211
 Halifax, Canada, 911
 Hamilton, Bermuda, 794
 Horta, Fayal, Azores, 2,409
 Jacmel, Haiti, 1,416
 Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,401
 La Guaira, Venezuela, 1,813
 Lagos, Nigeria, 5,063
 Las Palmas de Gran Canaria, Canary Islands, 3,251
 Les Cayes, Haiti, 1,374
 Limon, Costa Rica, 1,974
 Luderitz Bay, Southwest Africa, 6,538
 Maracaibo, Venezuela (via Windward Passage), 1,804
 Montecristi, Dominican Republic, 1,213
 Montevideo, Uruguay, 5,831
 Nassau, Bahamas (via Northeast Providence Channel), 880
 Nuevitas, Cuba, 1,198
 Paramaribo, Surinam, 2,321
 Pointe a Pitre, Guadeloupe, 1,653
 Ponce, Puerto Rico, 1,427
 Ponta Delgada, Azores, 2,529
 Port Antonio, Jamaica, 1,350
 Port au Prince, Haiti, 1,301
 Port of Spain, Trinidad, 1,918
 Port Plata, Dominican Republic, 1,215
 Porto Grande, Cape Verde Islands, 3,095
 Progreso, Mexico, 1,530
 Puerto Barrios, Guatemala (via Straits of Florida), 1,725
 Puerto Cabello, Venezuela, 1,818
 Puerto Cortes, Honduras, 1,690

Recife, Brazil, 3,772
 Rio de Janeiro, Brazil, 4,844
 St. Georges, Grenada, 1,843
 St. John, Canada (via Nantucket Light Vessel), 860
 St. John's, Canada, 1,400
 Salvador, Brazil, 4,163
 San Juan, Puerto Rico, 1,374
 San Juan del Norte, Nicaragua (via Straits of Florida), 1,968
 Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,710
 Santiago de Cuba, Cuba, 1,289
 Santo Domingo, Dominican Republic, 1,451
 Santos, Brazil, 5,031
 Sao Luiz, Brazil, 3,117
 Vitoria, Brazil, 4,581
 Walvisbaai, Southwest Africa, 6,385
 Willemstad, Curacao, 1,733

BALTIYSK, U.S.S.R.
 (54°38'20" N., 19°54'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 353
 Skagens Odde, Denmark (via Store Bael), 544
 Skagens Odde, Denmark (via The Sound), 429

Ports
 Oslo, Norway (via Store Bael), 668
 Oslo, Norway (via The Sound), 551

BAN SATTAHIP, THAILAND
 (12°39'00" N., 100°53'24" E.) to:

Junction Points*
 Lombok Strait, Indonesia, 1,620
 Singapore, 414

Ports
 Makasar, Celebes, 1,753
 Sai Gon, Vietnam, 598

BANDAR ABBAS, IRAN
 (27°08'00" N., 56°19'00" E.) to:

Junction Points*
 Port Said, U.A.R., 2,842
 Singapore, 3,381

Ports
 Aden, Aden Protectorate, 1,453
 Al Basrah, Iraq, 572
 Karachi, Pakistan, 643

BANDAR-E MA'SHUR, IRAN
 (30°27'40" N., 49°10'30" E.)

Add 6 miles to Bandar-e Shahpur distances.

BANDAR-E SHAPUR, IRAN
 (30°26'30" N., 49°05'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,169
 Port Said, U.A.R., 3,322
 Singapore, 3,872

Ports
 Al Bahrayn, Bahrain, 288
 Al Basrah, Iraq, 154
 Bushehr, Iran, 158

BANDJERMASIN, BORNEO, INDONESIA
 (3°20'00" S., 114°33'00" E.) to:

Junction Points*
 Lombok Strait, Indonesia, 357
 Singapore, 830
 Sunda Strait, Indonesia, 775
 Torres Strait, Australia, 1,785

Ports
 Makasar, Celebes, 399

BANES, CUBA
 (20°55'20" N., 75°42'20" W.) to:

Junction Points*
 Straits of Florida, 483

Ports
 Baltimore, Maryland, U.S.A., 1,140
 Boston, Massachusetts, U.S.A. (via Crooked Island Passage), 1,398
 Charleston, South Carolina, U.S.A. (via Crooked Island Passage), 802
 New York, New York, U.S.A., 1,216
 Norfolk, Virginia, U.S.A. (via Crooked Island Passage), 1,018
 Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage), 1,188
 Savannah, Georgia, U.S.A. (via Crooked Island Passage), 801

BANGHAZI, LIBYA
 (32°06'53" N., 20°03'06" E.) to:

Junction Points*
 Port Said, U.A.R., 673
 Strait of Gibraltar, 1,356

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Al Khums, Libya, 296
 Alexandria, U.A.R., 541
 Alger, Algeria, 927
 Alicante, Spain, 1,094
 Ancona, Italy, 800
 Annaba, Algeria, 702
 As Sukhayrah, Tunisia, 523
 Baniyas, Syria, 834
 Barcelona, Spain, 1,025
 Bari, Italy, 593
 Bayrut, Lebanon, 806
 Bizerte, Tunisia, 597
 Brindisi, Italy, 535
 Cartagena, Spain, 1,119
 Catania, Sicily, 406
 Ceuta, Morocco, 1,336
 Derince, Turkey, 750
 Famagusta, Cyprus, 768
 Fethiye, Turkey, 548
 Genova, Italy, 912
 Gibraltar, 1,338
 Haifa, Israel, 783
 Iraklion, Crete, 370
 Istanbul, Turkey, 716
 Izmir, Turkey, 561
 Kalamai, Greece, 313
 La Spezia, Italy, 876
 Livorno, Italy, 841
 Malaga, Spain, 1,286
 Marseille, France, 1,004
 Matruh, Egypt, 267
 Messina, Sicily, 430
 Napoli, Italy, 602
 Odessa, U.S.S.R., 1,064
 Oran, Algeria, 1,124
 Palermo, Sicily, 547
 Palma, Balearic Islands, 970
 Piraievs, Greece, 404
 Porto di Reggio Calabria, Sicily, 425
 Rijeka, Yugoslavia, 868
 Savona, Italy, 922
 Sibenik, Yugoslavia, 741
 Siracusa, Sicily, 381
 Split, Yugoslavia, 726
 Tarabulus, Libya, 354
 Taranto, Italy, 523
 Thessaloniki, Greece, 611
 Toulon, France, 972
 Trieste, Free Territory, 901
 Tubruq, Libya, 248
 Tunis, Tunisia, 585
 Valencia, Spain, 1,094
 Valletta, Malta, 359
 Venezia, Italy, 911
 Volos, Greece, 552

BANGKOK, THAILAND. See Krung
 Thep.

BANIAS, SYRIA. See Baniyas.

BANIYAS, SYRIA

(35°11'00" N., 35°57'00" E.) to:

Junction Points*

Port Said, U.A.R., 299
 Strait of Gibraltar, 2,045

Ports

Augusta, Sicily, 1,028
 Banghazi, Libya, 834
 Haifa, Israel, 153
 Marseille, France, 1,610
 Thessaloniki, Greece, 792
 Tunis, Tunisia, 1,275

BARACOA, CUBA

(20°21'30" N., 74°30'15" W.) to:

Junction Points*

Straits of Florida, 540

Ports

Baltimore, Maryland, U.S.A., 1,153
 Key West, Florida, U.S.A., 490
 Kingston, Jamaica, 265
 New York, New York, U.S.A., 1,226
 Philadelphia, Pennsylvania, U.S.A.,
 1,198

BARAHONA, DOMINICAN REPUB-
LIC

(18°12'30" N., 71°03'30" W.) to:

Junction Points*

Panama, Panama, 796

Ports

Barranquilla, Colombia, 497
 Kingston, Jamaica, 364
 San Juan, Puerto Rico, 294
 Willemstad, Caracao, 395

BARBADOS. See Bridgetown, Bar-
 bados.

BARBERS POINT, HAWAII, U.S.A.

(21°16'51" N., 158°06'00" W.) to:

Junction Points*

Panama, Panama, 4,694
 Singapore (via Sulu Sea), 5,866

Ports

Apra, Guam, 3,303
 San Francisco, California, U.S.A.,
 2,100
 Yokohama, Japan (via great circle),
 3,382

BARCELONA, SPAIN

(41°22'00" N., 2°11'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,600
 Strait of Gibraltar, 534

Ports

Alcudia, Balearic Islands, 114
 Alexandria, U.A.R., 1,482
 Alger, Algeria, 282
 Alicante, Spain, 228
 Almeria, Spain, 371
 Ancona, Italy, 1,212
 Annaba, Algeria, 386
 Banghazi, Libya, 1,025
 Bari, Italy, 1,005
 Batumi, U.S.S.R. (via Corinth Canal),
 2,032
 Batumi, U.S.S.R. (south of Greece),
 2,073
 Bayrut, Lebanon, 1,703
 Beaulieu, France, 280
 Bizerte, Tunisia, 442
 Brindisi, Italy, 947
 Cagliari, Sardinia, 379
 Cartagena, Spain, 282
 Ceuta, Morocco, 515
 Genova, Italy, 356
 Gibraltar, 516
 Golfe-Juan, France, 268
 Haifa, Israel, 1,699
 Hyeres, France, 218
 Iraklion, Crete, 1,186
 Istanbul, Turkey (via Corinth Canal),
 1,445
 Istanbul, Turkey (south of Greece),
 1,486
 Izmir, Turkey (via Corinth Canal),
 1,290
 Izmir, Turkey (south of Greece), 1,332
 La Spezia, Italy, 383
 Livorno, Italy, 386
 Mahon, Balearic Islands, 144
 Malaga, Spain, 464
 Marseille, France, 189
 Mentone, France, 285
 Messina, Sicily, 681
 Monaco, Monaco, 280
 Napoli, Italy, 559
 Odessa, U.S.S.R. (via Corinth Canal),
 1,793
 Odessa, U.S.S.R. (south of Greece),
 1,834
 Oran, Algeria, 365
 Palermo, Sicily, 574
 Palma, Balearic Islands, 140
 Piraievs, Greece (via Corinth Canal),
 1,091
 Piraievs, Greece (south of Greece),
 1,172

*JUNCTION POINT.—See Preface for use of junction points.

Pollenza, Balearic Islands, 113
 Port St. Louis du Rhone, France, 178
 Port Vendres, France, 108
 Rijeka, Yugoslavia, 1,279
 St. Raphael, France, 251
 Savona, Italy, 341
 Sibenik, Yugoslavia, 1,153
 Siracusa, Sicily, 752
 Skikda, Algeria, 354
 Split, Yugoslavia, 1,138
 Tarabulus, Libya, 762
 Taranto, Italy, 900
 Thessaloniki, Greece (via Corinth Canal), 1,339
 Thessaloniki, Greece (south of Greece), 1,380
 Toulon, France, 205
 Trieste, Free Territory, 1,313
 Tunis, Tunisia, 492
 Valencia, Spain, 165
 Valletta, Malta, 671
 Venezia, Italy, 1,323
 Villefranche, France, 277
 Volos, Greece (via Corinth Canal), 1,280
 Volos, Greece (south of Greece), 1,322

BARCELONA, VENEZUELA
 (10°10'00" N., 64°44'00" W.) to:

Junction Points*
 Panama, Panama, 1,014
 Yucatan Channel, 1,378

Ports
 Barranquilla, Colombia, 661
 Port of Spain, Trinidad, 218
 Santiago de Cuba, Cuba, 936

BARI, ITALY
 (41°08'22" N., 16°51'34" E.) to:

Junction Points*
 Port Said, U.A.R. (via Corinth Canal), 989
 Port Said, U.A.R. (south of Greece), 999
 Strait of Gibraltar, 1,374

Ports
 Alexandria, U.A.R., 890
 Alger, Algeria, 946
 Alicante, Spain, 1,100
 Ancona, Italy, 216
 Annaba, Algeria, 726
 Banghazi, Libya, 593
 Barcelona, Spain, 1,005
 Bayrut, Lebanon (via Corinth Canal), 1,038

Bayrut, Lebanon (south of Greece), 1,069
 Bizerte, Tunisia, 635
 Cagliari, Sardinia, 652
 Cartagena, Spain, 1,131
 Ceuta, Morocco, 1,354
 Dubrovnik, Yugoslavia, 108
 Genova, Italy, 810
 Gibraltar, 1,356
 Haifa, Israel (via Corinth Canal), 1,041
 Haifa, Israel (south of Greece), 1,065
 Iraklion, Crete, 554
 Istanbul, Turkey (via Corinth Canal), 755
 Istanbul, Turkey (south of Greece), 851
 Izmir, Turkey (via Corinth Canal), 601
 Izmir, Turkey (south of Greece), 697
 La Spezia, Italy, 775
 Livorno, Italy, 739
 Malaga, Spain, 1,303
 Marseille, France, 902
 Messina, Sicily, 329
 Napoli, Italy, 500
 Odessa, U.S.S.R. (via Corinth Canal), 1,103
 Odessa, U.S.S.R. (south of Greece), 1,200
 Oran, Algeria, 1,142
 Palermo, Sicily, 445
 Palma, Balearic Islands, 963
 Piraeus, Greece (via Corinth Canal), 402
 Piraeus, Greece (south of Greece), 538
 Rijeka, Yugoslavia, 288
 Savona, Italy, 820
 Sibenik, Yugoslavia, 167
 Siracusa, Sicily, 350
 Split, Yugoslavia, 155
 Tarabulus, Libya, 613
 Taranto, Italy, 208
 Thessaloniki, Greece (via Corinth Canal), 650
 Thessaloniki, Greece (south of Greece), 746
 Toulon, France, 870
 Trieste, Free Territory, 321
 Tunis, Tunisia, 622
 Valencia, Spain, 1,088
 Valletta, Malta, 427
 Venezia, Italy, 329
 Volos, Greece (via Corinth Canal), 591
 Volos, Greece (south of Greece), 687

BARLETTA, ITALY
 (41°20'00" N., 16°17'30" E.) to:

Junction Points*
 Port Said, U.A.R., 1,023
 Strait of Gibraltar, 1,398

Ports
 Ancona, Italy, 199
 Dubrovnik, Yugoslavia, 113
 Taranto, Italy, 232

BARRIOS, GUATEMALA. See
 Puerto Barrios.

BARRANQUILLA, COLOMBIA
 (10°58'00" N., 74°45'30" W.) to:

Junction Points*
 Yucatan Channel, 881

Ports
 Almirante, Panama, 477
 Amuay, Venezuela, 325
 Barahona, Dominican Republic, 497
 Barcelona, Venezuela, 661
 Caldera Bay, Dominican Republic, 508
 Carupano, Venezuela, 734
 Casilda, Cuba, 732
 Catia la Mar, Venezuela, 524
 Charleston, South Carolina, U.S.A., 1,391
 Cienfuegos, Cuba, 755
 Colon, Panama, 336
 Fortaleza, Brazil, 685
 Galveston, Texas, U.S.A., 1,577
 Guantanamo, Cuba, 534
 Haina, Dominican Republic, 536
 Hamilton, Bermuda, 1,465
 Kingston, Jamaica, 442
 La Guaira, Venezuela, 531
 La Romana, Dominican Republic, 569
 New Orleans, Louisiana, U.S.A., 1,458
 New York, New York, U.S.A., 1,801
 Oranjestad, Aruba, 506
 Pointe a Pitre, Guadeloupe, 857
 Port au Prince, Haiti, 592
 Puerto Cortes, Honduras, 873
 Puerto Cumarebo, Venezuela, 386
 Puerto de Hierro, Venezuela, 838
 St. Louis, Marie Galante, 857
 San Juan, Puerto Rico, 705
 Santa Maria, Cuba, 753
 Santiago de Cuba, Cuba, 549
 Santo Domingo, Dominican Republic, 538
 Surgidero de Batabano, Cuba, 944
 Turiamo, Venezuela, 504
 Veracruz, Mexico, 1,525
 Willemstad, Curacao, 389

BARROW, ALASKA, U.S.A.
 (71°20'00" N., 156°35'00" W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Panama, Panama, 6,383

Ports
Kiska, Alaska, U.S.A., 1,427
Nome, Alaska, U.S.A., 566
Seattle, Washington, U.S.A., 2,799
Whittier, Alaska, U.S.A., 1,897

BARROW IN FURNESS, ENGLAND
(54°05'30'' N., 3°13'30'' W.) to:

Junction Points*
Bishop Rock, England, 303
Fastnet, Ireland, 302
Inishtrahull, Ireland, 186
Pentland Firth, Scotland, 427

Ports
Avonmouth, England, 288
Belfast, Ireland, 116
Brest, France, 416
Cardiff, Wales, 273
Cherbourg, France, 448
Cobh, Ireland, 252
Dublin, Ireland, 122
Fishguard, Wales, 157
Glasgow, Scotland, 172
London, England, 665
Southampton, England, 485
Swansea, Wales, 242

BARRY, WALES
(51°23'40'' N., 3°15'30'' W.)

Subtract 6 miles from Cardiff distances.

BASRA, IRAQ. See Al Basrah.

BASSEIN, BURMA
(16°47'00'' N., 94°44'00'' E.) to:

Junction Points*
Port Said, U.A.R., 4,638
Singapore, 1,137

Ports
Calcutta, India, 643
Colombo, Ceylon, 1,194
Penang, Malaysia, 786

BASSE-TERRE, GUADELOUPE
(15°59'45'' N., 61°44'15'' W.) to:

Junction Points*
Straits of Florida, 1,317

Ports
New York, New York, U.S.A. (via Anegada Channel), 1,624

Pointe a Pitre, Guadeloupe, 31
Roseau, Dominica, 48
San Juan, Puerto Rico, 314

BASSENS, FRANCE
(44°54'00'' N., 0°32'15'' W.)

Subtract 3½ miles from Bordeaux distances.

BASSETERRE, ST. CHRISTOPHER
(17°17'30'' N., 62°43'00'' W.) to:

Ports
Hamilton, Bermuda, 941
New York, New York, U.S.A. (via Anegada Channel), 1,531
Port au Prince, Haiti, 419
San Juan, Puerto Rico, 214

BASTIA, CORSICA
(42°41'45'' N., 9°27'30'' E.) to:

Junction Points*
Port Said, U.A.R., 1,337
Strait of Gibraltar, 868

Ports
Bizerte, Tunisia, 333
Genova, Italy, 108
Napoli, Italy, 258

BATA, SPANISH GUINEA
(1°52'27'' N., 9°45'35'' E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,291
Ushant, France, 4,173

Ports
Douala, Cameroon, 141
Matadi, Republic of the Congo, 663

BATANGAS, LUZON, PHILIPPINES
(13°45'20'' N., 121°02'00'' E.) to:

Ports
Cebu, Philippines, 309
Iloilo, Philippines, 270
Jolo, Philippines, 480
Tacloban, Philippines, 293
Zamboanga, Philippines, 436

BATAVIA, INDONESIA. See Djakarta.

BATH, MAINE, U.S.A.
(43°54'00'' N., 69°48'30'' W.) to:

Junction Points*
Bishop Rock, England (track A), 2,877
Bishop Rock, England (track B), 2,817
Bishop Rock, England (track C), 2,738

Ports
St. John, Canada, 206

BATHURST, GAMBIA
(13°27'00'' N., 16°34'00'' W.) to:

Junction Points*
Strait of Gibraltar, 1,575

Ports
Cadiz, Spain, 1,587
Freetown, Sierra Leone, 450
Funchal, Madeira Island, 1,182
Lisboa, Portugal, 1,632
Marshall, Liberia, 681
Pointe Noire, Gabon, 2,175
Ponta Delgada, Azores, 1,551
Porto Grande, Cape Verde Islands, 553
Vigo, Spain, 1,832

BATON ROUGE, LOUISIANA, U.S.A.
(30°27'00'' N., 91°06'00'' W.)

Add 115 miles to New Orleans distances.

BATUM, U.S.S.R. See Batumi.

BATUMI, U.S.S.R.
(41°38'46'' N., 41°38'51'' E.) to:

Junction Points*
Port Said, U.A.R., 1,391
Strait of Gibraltar (via Corinth Canal), 2,392
Strait of Gibraltar (south of Greece), 2,408

Ports
Alger, Algeria (via Corinth Canal), 1,963
Alger, Algeria (south of Greece), 1,980
Barcelona, Spain (via Corinth Canal), 2,032
Barcelona, Spain (south of Greece), 2,073
Iraklion, Crete, 1,032
Istanbul, Turkey, 591
Izmir, Turkey, 880
Marseille, France (via Corinth Canal), 1,929
Marseille, France (south of Greece), 1,970

*JUNCTION POINT.—See Preface for use of junction points.

Novarossiysk, U.S.S.R., 255
Odessa, U.S.S.R., 569
Tarabulus, Libya, 1,540
Thessaloniki, Greece, 926
Trieste, Free Territory (via Corinth Canal), 1,650
Trieste, Free Territory (south of Greece), 1,749

BATUMSKAYA, U.S.S.R. See Batumi.

BAYONNE, FRANCE
(43°29'40" N., 1°28'30" W.) to:

Junction Points*
Strait of Gibraltar, 912
Ushant, France, 345

Ports
Bordeaux, France, 172
El Ferrol del Caudillo, Spain, 322
Horta, Azores, 1,277

BAYONNE, NEW JERSEY, U.S.A.
(40°41'00" N., 74°01'00" W.)

For ocean distance, subtract 2½ miles from New York distances.

BAYRUT, LEBANON
(33°54'12" N., 35°30'46" E.) to:

Junction Points*
Port Said, U.A.R., 230
Strait of Gibraltar, 2,034

Ports
Ajaccio, Corsica, 1,437
Alexandria, U.A.R., 341
Alger, Algeria, 1,605
Alicante, Spain, 1,772
Ancona, Italy (via Corinth Canal), 1,245
Ancona, Italy (south of Greece), 1,276
Annaba, Algeria, 1,381
Antalya, Turkey, 322
Ashdod Yam, Israel, 136
Banghazi, Libya, 806
Barcelona, Spain, 1,703
Bari, Italy (via Corinth Canal), 1,038
Bari, Italy (south of Greece), 1,069
Bizerte, Tunisia, 1,276
Brindisi, Italy (via Corinth Canal), 980
Brindisi, Italy (south of Greece), 1,011
Cartagena, Spain, 1,797

Ceuta, Morocco, 2,014
Dubrovnik, Yugoslavia (via Corinth Canal), 1,074
Dubrovnik, Yugoslavia (south of Greece), 1,107
Genova, Italy, 1,508
Gibraltar, 2,017
Haifa, Israel, 76
Iraklion, Crete, 526
Iskenderun, Turkey, 180
Istanbul, Turkey, 896
Izmir, Turkey, 651
Kavala, Greece, 756
La Spezia, Italy, 1,473
Larnaca, Cyprus, 112
Livorno, Italy, 1,437
Malaga, Spain, 1,964
Marseille, France, 1,600
Mersin, Turkey, 179
Messina, Sicily, 1,027
Napoli, Italy, 1,198
Odessa, U.S.S.R., 1,194
Oran, Algeria, 1,803
Palermo, Sicily, 1,143
Palma, Balearic Islands, 1,648
Piraeus, Greece, 647
Rijeka, Yugoslavia (via Corinth Canal), 1,312
Rijeka, Yugoslavia (south of Greece), 1,345
Rodhos, Rodhos, 393
Savona, Italy, 1,519
Sibenik, Yugoslavia (via Corinth Canal), 1,184
Sibenik, Yugoslavia (south of Greece), 1,218
Siracusa, Sicily, 1,013
Split, Yugoslavia (via Corinth Canal), 1,169
Split, Yugoslavia (south of Greece), 1,203
Tarabulus, Libya, 1,129
Taranto, Italy (via Corinth Canal), 1,000
Taranto, Italy (south of Greece), 1,023
Tarragona, Spain, 1,738
Thessaloniki, Greece, 783
Toulon, France, 1,568
Trieste, Free Territory (via Corinth Canal), 1,346
Trieste, Free Territory (south of Greece), 1,379
Tubruq, Libya, 595
Tunis, Tunisia, 1,263
Valencia, Spain, 1,770
Valletta, Malta, 1,049
Venezia, Italy (via Corinth Canal), 1,356
Venezia, Italy (south of Greece), 1,387
Volos, Greece, 725

BEAR ISLAND, SVALBARD. See Bjornoya.

BEAULIEU, FRANCE
(43°42'30" N., 7°20'12" E.) to:

Junction Points*
Port Said, U.A.R., 1,453
Strait of Gibraltar, 792

Ports
Barcelona, Spain, 280
Genova, Italy, 316
Livorno, Italy, 130

BEAUMONT, TEXAS, U.S.A.
(30°04'40" N., 94°05'10" W.)

Add 24 miles to Port Arthur distances.

BEIRA, MOZAMBIQUE
(19°49'30" S., 34°49'30" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,454
Port Said, U.A.R., 3,990
Singapore, 4,520

Ports
Aden, Aden Protectorate, 2,610
Antsirana, Malagasy Republic, 1,003
Belawan, Indonesia, 4,187
Darwin, Australia, 5,553
Fremantle, Australia, 4,351
Inhambane, Mozambique, 259
Lindi, Tanganyika, 832
Lourenco Marques, Mozambique, 476
Majunga, Malagasy Republic, 732
Malacca, Malaysia, 4,405
Manakara, Malagasy Republic, 974
Mocambique, Mozambique, 476
Mombasa, Kenya, 1,146
Penang, Malaysia (north of Madagascar), 4,232
Port Louis, Mauritius, 1,448
Quelimane, Mozambique, 123
Sabang, Indonesia, 3,921
St. Denis, Reunion Island, 1,325
Tamatave, Malagasy Republic, 1,239
Tulear, Malagasy Republic, 539

BEIRUT, LEBANON. See Bayrut.

BEJAIA, ALGERIA
(36°45'00" N., 5°05'30" E.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Port Said, U.A.R., 1,423
Strait of Gibraltar, 545

Ports
Annaba, Algeria, 156
Arzew, Algeria, 294
Palma, Balearic Islands, 212

BELAWAN, INDONESIA
(3°47'00" N., 98°40'40" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,246
Lombok Strait, Indonesia, 1,342
Port Said, U.A.R., 4,688
Singapore, 368
Sunda Strait, Indonesia, 870
Torres Strait, Australia (via Selat Riouw and Selat Karimata), 2,839

Ports
Aden, Aden Protectorate, 3,299
Al Bahrayn, Bahrain, 3,316
Al Basrah, Iraq, 3,553
Al Kuwayt, Kuwait, 3,500
Antsirana, Malagasy Republic, 3,221
Balikpapan, Borneo, 1,422
Beira, Mozambique, 4,187
Berbera, Somali Republic, 3,313
Bombay, India, 2,109
Bushehr, Iran, 3,372
Calcutta, India, 1,326
Calicut, India, 1,609
Cocanada, India, 1,261
Colombo, Ceylon, 1,240
Dar es Salaam, Tanganyika, 3,709
Diego García, Chagos Archipelago, 1,860
Djakarta, Indonesia, 864
East London, Republic of South Africa, 4,749
Fort Dauphin, Malagasy Republic, 3,642
Karachi, Pakistan, 2,550
Lourenco Marques, Mozambique, 4,436
Madras, India, 1,252
Majunga, Malagasy Republic, 3,512
Malacca, Malaysia, 253
Masqat, Mascot and Oman, 2,799
Mocambique, Mozambique, 3,747
Mombasa, Kenya, 3,654
Mosselbaai, Republic of South Africa, 5,051
Port Elizabeth, Republic of South Africa, 4,876
Port Louis, Mauritius, 2,997
Rangoon, Burma, 802
Sabang, Indonesia, 268
St. Denis, Reunion Island, 3,112

Surabaya, Indonesia, 1,132
Tamatave, Malagasy Republic, 3,342
Tanga, Tanganyika, 3,704
Victoria, Seychelles, 2,734
Zamboanga, Philippines, 1,570
Zanzibar, Zanzibar, 3,727

BELEM, BRAZIL
(1°27'00" S., 48°30'20" W.) to:

Junction Points*
Bishop Rock, England, 3,760
Cape of Good Hope, Republic of South Africa, 4,368
Fastnet, Ireland, 3,741
Inishtrahull, Ireland, 3,972
Montreal, Canada (via Strait of Can- so), 3,709
Montreal, Canada (via Cabot Strait), 3,680
Pentland Firth, Scotland, 4,219
Punta Arenas, Chile, 4,363
Strait of Gibraltar, 3,285
Straits of Florida, 2,653
Ushant, France, 3,748
Yucatan Channel, 2,671

Ports
Baltimore, Maryland, U.S.A., 2,953
Bordeaux, France, 3,868
Boston, Massachusetts, U.S.A., 2,970
Bridgetown, Barbados, 1,154
Buenos Aires, Argentina, 3,274
Cabedelo, Brazil, 1,021
Cadiz, Spain, 3,286
Castries, St. Lucia, 1,265
Cayenne, French Guiana, 516
Charleston, South Carolina, U.S.A., 2,773
Charlotte Amalie, Virgin Islands, 1,598
Cienfuegos, Cuba, 2,460
Colon, Panama, 2,320
Dakar, Senegal, 2,104
Georgetown, British Guiana, 896
Guantanamo, Cuba, 2,148
Guiria, Venezuela, 1,226
Habana, Cuba, 2,613
Halifax, Canada, 2,904
Hamilton, Bermuda, 2,274
Jacksonville, Florida, U.S.A., 2,773
Key West, Florida, U.S.A., 2,603
Kingston, Jamaica, 2,159
Lisboa, Portugal, 3,251
Luderitz Bay, Southwest Africa, 4,076
Maceio, Brazil, 1,211
Natal, Brazil, 954
New Amsterdam, British Guiana, 859
New York, New York, U.S.A., 2,975
Norfolk, Virginia, U.S.A., 2,832
Paramaribo, Surinam, 747

Pedernales, Venezuela, 1,191
Philadelphia, Pennsylvania, U.S.A., 2,950
Ponta Delgada, Azores, 2,678
Port au Prince, Haiti, 2,192
Port of Spain, Trinidad, 1,212
Portsmouth, New Hampshire, U.S.A., 2,959
Puerto de Hierro, Venezuela, 1,215
Recife, Brazil, 1,084
Rio de Janeiro, Brazil, 2,174
St. Helena Island, 4,329
St. John, Canada, 2,998
St. Johns, Antigua, 1,433
St. John's, Canada, 2,968
San Felix, Venezuela, 1,222
San Fernando, Trinidad, 1,215
San Juan, Puerto Rico, 1,668
Santa Cruz de Tenerife, Canary Is- lands, 2,599
Santo Domingo, Dominican Republic, 1,819
Sao Luiz, Brazil, 372
Vigo, Spain, 3,398

BELFAST, IRELAND
(54°37'00" N., 5°54'00" W.) to:

Junction Points*
Bishop Rock, England, 320
Fastnet, Ireland, 311
Inishtrahull, Ireland, 97
Pentland Firth, Scotland, 341

Ports
Antwerpen, Belgium, 722
Avonmouth, England, 308
Barrow in Furness, England, 116
Cardiff, Wales, 293
Cobh, Ireland, 264
Fishguard, Wales, 182
Le Harve, France, 542
Limerick, Ireland (north of Ireland), 376
Loch Ewe, Scotland, 228
Londonderry, Ireland (via Rathlin Sound), 102
Milford Haven, Wales, 222
Stornoway, Scotland, 234
Workington, England, 87

BELIZE, BRITISH HONDURAS
(17°28'00" N., 88°11'00" W.) to:

Junction Points*
Montreal (via Strait of Canso), 2,985
Panama, Panama, 859
Yucatan Channel, 337

*JUNCTION POINT.—See Preface for use of junction points.

<p>Ports Alvaro Obregon, Mexico, 756 Apalachicola, Florida, U.S.A., 788 Baltimore, Maryland, U.S.A. (via Straits of Florida), 1,625 Boston, Massachusetts, U.S.A. (via Straits of Florida and Yucatan Channel), 1,934 Brunswick, Georgia, U.S.A. (via Straits of Florida), 1,072 Campeche, Mexico (west of Banco Chinchorro and Isla de Cozumel), 609 Cap Haitien, Haiti, 950 Carmen, Mexico (west of Banco Chinchorro and Isla de Cozumel), 688 Cartagena, Colombia, 904 Castries, St. Lucia, 1,609 Charlotte Amalie, Virgin Islands, 1,368 Cienfuegos, Cuba, 545 Colon, Panama, 816 Galveston, Texas, U.S.A., 935 Gulfport, Mississippi, U.S.A., 838 Habana, Cuba, 528 Jacksonville, Florida, U.S.A., 1,047 Key West, Florida, U.S.A., 590 Kingston, Jamaica, 685 La Guaira, Venezuela, 1,328 Matagorda Bay, Texas, U.S.A. (west of Banco Chinchorro and Isla de Cozumel), 957 Mathew Town, Great Inagua Island, 902 Miami, Florida, U.S.A., 734 Mobile, Alabama, U.S.A., 846 New Orleans, Louisiana, U.S.A. (via South Pass), 850 Norfolk, Virginia, U.S.A., 1,503 Pensacola, Florida, U.S.A., 826 Pointe a Pitre, Guadeloupe, 1,578 Port au Prince, Haiti (south of Jamaica), 953 Port au Prince, Haiti (north of Jamaica), 933 Port of Spain, Trinidad, 1,637 Portland, Maine, U.S.A., 1,967 Puerto Cabello, Venezuela, 1,289 San Juan del Norte, Nicaragua, 619 Santo Domingo, Dominican Republic, 1,088 Tampico, Mexico, 927 Tuxpan, Mexico, 897 Veracruz, Mexico, 862 Willemstad, Curacao, 1,178</p>	<p>BELLINGHAM, WASHINGTON, U.S.A. (48°45'00" N., 122°30'00" W.) to:</p> <p>Ports Nanaimo, Canada, 76 Vancouver, Canada, 70 Victoria, Canada, 52 Yokohama, Japan, 4,245</p> <p>BELOMORSK, U.S.S.R. (64°32'00" N., 34°48'00" E.)</p> <p>Add 67 miles to Arkhangelsk distances.</p> <p>BENGASI, LIBYA. See Banghazi.</p> <p>BENGHAZI, LIBYA. See Banghazi.</p> <p>BENGUELA, ANGOLA (12°34'00" S., 13°23'00" E.) to:</p> <p>Ports Lagos, Nigeria, 1,289 Marshall, Liberia, 1,811 Pointe Noire, Gabon, 480 Porto Grande, Cape Verde Islands, 2,101</p> <p>BERBERA, SOMALI REPUBLIC (10°26'30" N., 45°01'00" E.) to:</p> <p>Junction Points* Singapore, 3,646</p> <p>Ports Belawan, Indonesia, 3,313 Darwin, Australia (south of Socotra, via Eight Degree Channel, and south of Java), 5,384 Fremantle, Australia, 4,933 Malacca, Malaysia, 3,531 Penang, Malaysia, 3,358 Sabang, Indonesia, 3,047</p> <p>BERGEN, NORWAY (60°24'00" N., 5°19'00" E.) to:</p> <p>Junction Points* Bishop Rock, England, 911 Pentland Firth, Scotland, 296 Skagens Odde, Denmark, 305 Ushant, France, 894</p> <p>Ports Aberdeen, Scotland, 309 Akureyri, Iceland, 803 Alesund, Norway, 167</p>	<p>Amsterdam, Netherlands, 502 Antwerpen, Belgium, 602 Arendal, Norway, 254 Blyth, England, 400 Bodo, Norway, 521 Bremerhaven, Germany, 447 Calais, France, 588 Cherbourg, France, 734 Dover, England, 590 Dunkerque, France, 585 Emden, Germany, 457 Esbjerg, Denmark, 361 Farsund, Norway, 182 Flekkefjord, Norway, 170 Fredrikstad, Norway, 335 Goteborg, Sweden, 356 Grimstad, Norway, 250 Hafnarfjordhur, Iceland, 884 Hamburg, Germany, 486 Hammerfest, Norway, 817 Harstad, Norway, 673 Hirtshals, Denmark, 280 Hull, England, 474 Hvalfjordhur, Ireland, 887 Keflavik, Iceland, 875 Kragero, Norway, 289 Kristiansand, Norway, 226 Kristiansund, Norway, 232 Larvik, Norway, 317 Le Havre, France, 702 Leith, Scotland, 386 Lillesand, Norway, 241 London, England, 613 Longyearbyen, Svalbard, 1,124 Mandal, Norway, 201 Molde, Norway, 201 Mosjoen, Norway, 473 Murmansk, U.S.S.R., 1,105 Namsos, Norway, 384 Narvik, Norway, 624 Newcastle, England, 403 Oostende, Belgium, 563 Oslo, Norway, 378 Plymouth, England, 819 Portland, England, 745 Portsmouth, England, 695 Reykjavik, Iceland, 872 Risør, Norway, 279 Rotterdam, Netherlands, 533 Sandefjord, Norway, 317 Seydhisfjordhur, Iceland, 634 Skien, Norway, 317 Sogndal, Norway, 152 Southampton, England, 713 Stavanger, Norway (via outer lead), 115 Stavanger, Norway (via inner lead), 111 Tonsberg, Norway, 329 Torshavn, Faeroe Islands, 372 Tromso, Norway, 705</p>
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*JUNCTION POINT.—See Preface for use of junction points.

Trondheim, Norway, 321
Tvedestrand, Norway, 272
Wilhelmshaven, Germany, 441
Zeebrugge, Belgium, 558

BERLEVAG, NORWAY
(70°51'30" N., 29°05'45" E.) to:

Junction Points*
Pentland Firth, Scotland, 1,150
Skagens Odde, Denmark, 1,243

Ports
Arkhangelsk, U.S.S.R., 540
Dikson Harbor, U.S.S.R., 1,069
Reykjavik, Iceland, 1,200

BERMUDA. See Hamilton,
Bermuda.

BEYROUTH, LEBANON.
See Bayrut.

BHAUNAGAR, INDIA.
See Bhavnagar.

BHAVNAGAR, INDIA
(21°48'15" N., 72°09'00" E.) to:

Ports
Aden, Aden Protectorate, 1,707
Bombay, India, 204
Colombo, Ceylon, 1,073
Karachi, Pakistan, 481

BIKINI, MARSHALL ISLANDS
(11°31'30" N., 165°33'00" E.) to:

Junction Points*
Panama, Panama, 4,915
Singapore, 3,591

Ports
Apra, Guam, 1,263
Honolulu, Hawaii, U.S.A., 1,710

BILBAO, SPAIN
(43°20'30" N., 3°02'00" W.) to:

Junction Points*
Strait of Gibraltar, 854
Ushant, France, 346

Ports
Boston, Massachusetts, U.S.A., 2,987

Huelva, Spain, 804
La Pallice, France, 214
Lorient, France, 274
Marin, Spain, 387
New York, New York, U.S.A., (track B), 3,177
Quiberon, France, 249
Setubal, Portugal, 612
Villagarcia, Spain, 357

BISHOP ROCK, ENGLAND*
(49°45'00" N., 6°35'00" W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,790
Fastnet, Ireland, 149
Inishtrahull, Ireland, 395
Kiel Canal (east end), Germany, 727
Montreal, Canada (track D, via Cabot Strait), 2,989
Montreal, Canada, (track E, via Cabot Strait), 2,836
Montreal, Canada (track F, via Cabot Strait), 2,808
Montreal, Canada (track G, via Strait of Belle Isle), 2,681
Panama, Panama (via Mona Passage), 4,388
Pentland Firth, Scotland (via Irish Sea), 636
Punta Arenas, Chile, 7,019
Skagens Odde, Denmark, 851
Strait of Gibraltar, 969
Straits of Florida (track A), 3,876
Straits of Florida (track B), 3,872
Straits of Florida (track C), 3,859
Yucatan Channel (track A), 4,193
Yucatan Channel (track B), 4,189
Yucatan Channel (track C), 4,176

Ports
Amsterdam, Netherlands, 481
Angmagssalik, Greenland, 1,369
Antwerpen, Belgium, 449
Ardrossan, Scotland, 350
Argentia, Canada, 1,949
Arkhangelsk, U.S.S.R., 2,263
Avonmouth, England, 191
Baltimore, Maryland, U.S.A. (track A), 3,290
Baltimore, Maryland, U.S.A. (track B), 3,260
Baltimore, Maryland, U.S.A. (track C), 3,208
Barrow in Furness, England, 303
Bath, Maine, U.S.A. (track A), 2,817
Bath, Maine, U.S.A. (track B), 2,776
Bath, Maine, U.S.A. (track C), 2,696
Belem, Brazil, 3,760
Belfast, Ireland, 320
Bergen, Norway, 911

Blyth, England, 610
Bodo, Norway, 1,405
Bordeaux, France, 397
Boston, Massachusetts, U.S.A. (track A), 2,860
Boston, Massachusetts, U.S.A. (track B), 2,816
Boston, Massachusetts, U.S.A. (track C), 2,744
Boulogne, France, 322
Bremerhaven, Germany, 657
Buenos Aires, Argentina, 5,947
Cadiz, Spain, 930
Caen, France, 264
Cairn Ryan, Scotland, 330
Calais, France, 333
Cap Haitian, Haiti, 3,565
Cape Town, Republic of South Africa, 5,772
Cardiff, Wales, 176
Cartagena, Colombia, 4,138
Cartagena, Colombia (low power, May–September), 4,199
Cartagena, Colombia (low power, October–April), 4,214
Castries, St. Lucia, 3,405
Charleston, South Carolina, U.S.A. (track A), 3,422
Charleston, South Carolina, U.S.A. (track B), 3,398
Charleston, South Carolina, U.S.A. (track C), 3,358
Charlotte Amalie, Virgin Islands, 3,369
Cherbourg, France, 197
Christiansted, Virgin Islands, 3,370
Cienfuegos, Cuba (track A), 4,056
Cobh, Ireland, 143
Colon, Panama (via Mona Passage), 4,344
Colon, Panama (low power, May–September), 4,408
Colon, Panama (low power, October–April), 4,424
Dakar, Senegal, 2,195
Dartmouth, England, 122
Den Helder, Netherlands, 509
Dieppe, France, 297
Douglas, Isle of Man, 276
Dover, England, 323
Dublin, Ireland, 232
Dundee, Scotland, 713
Dunkerque, France, 355
Egersund, Norway, 797
El Ferrol del Caudillo, Spain, 394
Emden, Germany, 606
Esbjerg, Denmark, 688
Fishguard, Wales, 161
Fleetwood, England, 307
Freetown, Sierra Leone, 2,673
Funchal, Madeira Island, 1,136
Georgetown, British Guiana, 3,643
Glasgow, Scotland, 402

*JUNCTION POINT.—See Preface for use of junction points.

Granville, France, 267
 Guantanamo, Cuba (track A), 3,698
 Habana, Cuba (track A), 3,880
 Habana, Cuba (track B), 3,876
 Habana, Cuba (track C), 3,863
 Halifax, Canada (track A), 2,556
 Halifax, Canada (track B), 2,507
 Halifax, Canada (tracks C and D), 2,432
 Halifax, Canada (track E), 2,325
 Halifax, Canada (track F), 2,305
 Hamburg, Germany, 717
 Hamilton, Bermuda (track A), 2,769
 Hamilton, Bermuda (track B), 2,764
 Hartlepool, England, 594
 Holyhead, Wales, 232
 Horta, Fayal, Azores, 1,158
 Hull, England, 531
 Ivigtut, Greenland (direct), 1,608
 Ivigtut, Greenland (via 75 miles off Kap Farvel), 1,652
 Jacksonville, Florida, U.S.A. (tracks C and D), 3,525
 Key West, Florida, U.S.A. (track A), 3,818
 Key West, Florida, U.S.A. (track B), 3,814
 Key West, Florida, U.S.A. (track C), 3,800
 Kingston, Jamaica (track A), 3,854
 Kristiansand, Norway, 809
 La Guaira, Venezuela, 3,777
 Las Palmas de Gran Canaria, Canary Islands, 1,360
 Le Havre, France, 263
 Leith, Scotland, 708
 Lisboa, Portugal, 710
 Liverpool, England, 297
 London, England, 413
 Londonderry, Ireland, 396
 Lorient, France, 202
 Methil, Scotland, 698
 Miami, Florida, U.S.A. (track A), 3,686
 Miami, Florida, U.S.A. (track B), 3,682
 Miami, Florida, U.S.A. (track C), 3,669
 Middlesbrough, England, 591
 Milford Haven, Wales, 129
 Montevideo, Uruguay, 5,834
 Narvik, Norway, 1,505
 New London, Connecticut, U.S.A. (track A), 2,931
 New London, Connecticut, U.S.A. (track B), 2,897
 New London, Connecticut, U.S.A. (track C), 2,834
 New York, New York, U.S.A. (track A), 3,019
 New York, New York, U.S.A. (track B), 2,986

New York, New York, U.S.A. (track C), 2,922
 Newcastle, England, 616
 Newport, Wales, 177
 Nieuwpoort, Belgium, 375
 Norfolk, Virginia, U.S.A. (track A), 3,168
 Norfolk, Virginia, U.S.A. (track B), 3,137
 Norfolk, Virginia, U.S.A. (track C), 3,085
 Oostende, Belgium, 400
 Oslo, Norway, 947
 Paramaribo, Surinam, 3,602
 Philadelphia, Pennsylvania, U.S.A. (track A), 3,159
 Philadelphia, Pennsylvania, U.S.A. (track B), 3,124
 Philadelphia, Pennsylvania, U.S.A. (track C), 3,066
 Plymouth, England, 106
 Ponta Delgada, Azores, 1,103
 Port au Prince, Haiti (track A), 3,725
 Port of Spain, Trinidad, 3,603
 Port Talbot, Wales, 149
 Portland, England, 181
 Porto Grande, Cape Verde Islands, 2,165
 Portsmouth, England (via Needles Channel), 225
 Praia, Bahia Praia, Terceira, Azores, 1,128
 Providence, Rhode Island, U.S.A. (track A), 2,925
 Providence, Rhode Island, U.S.A. (track B), 2,891
 Providence, Rhode Island, U.S.A. (track C), 2,828
 Quiberon, France, 253
 Recife, Brazil, 3,775
 Rio de Janeiro, Brazil, 4,846
 Rotterdam, Netherlands, 454
 St. John's, Canada, 1,804
 St. Malo, France, 90
 San Juan, Puerto Rico, 3,390
 Santa Cruz de Tenerife, Canary Islands, 1,356
 Santo Domingo, Dominican Republic, 3,585
 Seaham Harbor, England, 625
 Shoreham By Sea, England, 249
 Southampton, England, 232
 Stavanger, Norway, 836
 Sunderland, England, 605
 Swansea, Wales, 155
 Tromso, Norway, 1,597
 Trondheim, Norway, 1,202
 Vigo, Spain, 484
 Villa do Porto, Santa Maria, Azores, 1,128
 Washington, D.C., U.S.A., (track A), 3,304

Washington, D.C., U.S.A., (track B), 3,260
 Washington, D.C., U.S.A., (track C), 3,221
 Waterford, Ireland, 137
 Wilhelmshaven, Germany, 651
 Willemstad, Curacao, 3,797
 Wilmington, North Carolina, U.S.A., (track A), 3,352
 Wilmington, North Carolina, U.S.A., (track B), 3,329
 Wilmington, North Carolina, U.S.A., (track C), 3,289
 Workington, England, 308
 Zeebrugge, Belgium, 393

BISSAO, PORTUGUESE GUINEA. See Bissau.

BISSAU, PORTUGUESE GUINEA (11°51'00" N., 15°38'00" W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 3,518
 Ushant, France, 2,401

Ports
 Natal, Brazil, 1,604
 Porto Grande, Cape Verde Islands, 651

BIZERTA, TUNISIA. See Bizerte.

BIZERTE, TUNISIA (37°14'13" N., 9°51'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,184
 Strait of Gibraltar, 769

Ports
 Alexandria, U.A.R., 1,064
 Alger, Algeria, 340
 Alicante, Spain, 507
 Ancona, Italy, 842
 Annaba, Algeria, 116
 Banghazi, Libya, 597
 Barcelona, Spain, 442
 Bari, Italy, 635
 Bastia, Corsica, 333
 Bayrut, Lebanon, 1,276
 Brindisi, Italy, 577
 Cagliari, Sardinia, 126
 Cartagena, Spain, 532
 Cuta, Morocco, 750
 Genova, Italy, 437
 Haifa, Israel, 1,273

*JUNCTION POINT.—See Preface for use of junction points.

Iraklion, Crete, 758
 Istanbul, Turkey (via Corinth Canal), 1,046
 Istanbul, Turkey (south of Greece), 1,063
 Izmir, Turkey (via Corinth Canal), 892
 Izmir, Turkey, (south of Greece), 909
 La Spezia, Italy, 414
 Livorno, Italy, 382
 Malaga, Spain, 699
 Marseille, France, 428
 Messina, Sicily, 364
 Napoli, Italy, 300
 Odessa, U.S.S.R. (via Corinth Canal), 1,394
 Odessa, U.S.S.R., (south of Greece), 1,411
 Olbia, Sardinia, 236
 Oran, Algeria, 538
 Palermo, Sicily, 192
 Palma, Balearic Islands, 384
 Piraeus, Greece (via Corinth Canal), 692
 Piraeus, Greece (south of Greece), 749
 Rijeka, Yugoslavia, 910
 Sant Antioco Ponti, Sardinia, 132
 Savona, Italy, 440
 Sibenik, Yugoslavia, 783
 Siracusa, Sicily, 296
 Split, Yugoslavia, 768
 Tarabulus, Libya, 335
 Taranto, Italy, 530
 Thessaloniki, Greece (via Corinth Canal), 941
 Thessaloniki, Greece (south of Greece), 958
 Toulon, France, 405
 Trieste, Free Territory, 943
 Valencia, Spain, 506
 Valletta, Malta, 247
 Venezia, Italy, 953
 Volos, Greece (via Corinth Canal), 882
 Volos, Greece (south of Greece), 899

BJORNEBORG, FINLAND. See Port.

BJORNOYA, SVALBARD
 (74°29'45" N., 19°12'30" E.) to:

Ports
 Jan Mayen, 544
 Reykjavik, Iceland (north of Iceland), 1,152
 Reykjavik, Iceland (south of Iceland), 1,234
 Tromsø, Norway, 306
 Vadso, Norway, 373
 Vardo, Norway, 328

BLANCHE BAY, NEW BRITAIN.
 See Rabaul.

BLAYE, FRANCE
 (45°07'30" N., 0°40'15" W.)

For ocean distances subtract 13 miles from Bordeaux distances.

BLUEFIELDS, NICARAGUA
 (12°00'00" N., 83°42'00" W.) to:

Junction Points*
 Panama, Panama, 319
 Yucatan Channel, 629

Ports
 Baltimore, Maryland, U.S.A., 1,928
 Boston, Massachusetts, U.S.A., 2,184
 Cartagena, Colombia, 497
 Colon, Panama, 276
 Galveston, Texas, U.S.A., 1,290
 Guantanamo, Cuba, 710
 Habana, Cuba (via inside route), 816
 New Orleans, Louisiana, U.S.A. (via South Pass and inside route), 1,201
 New York, New York, U.S.A. (via Yucatan Channel), 1,995
 New York, New York, U.S.A. (via Windward Passage), 2,001
 Philadelphia, Pennsylvania, U.S.A., 1,973
 Puerto Cortes, Honduras, 519
 Veracruz, Mexico, 1,237

BLUFF HARBOR, NEW ZEALAND
 (46°35'50" S., 168°20'30" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 2,484
 Torres Strait, Australia, 2,797
 Wilson Promontory, Australia, 1,133

Ports
 Melbourne, Australia, 1,211
 Wellington, New Zealand, 455

BLYTH, ENGLAND
 (55°07'45" N., 1°30'00" W.) to:

Junction Points*
 Bishop Rock, England, 610
 Pentland Firth, Scotland, 290

Ports
 Bergen, Norway, 400
 Leith, Scotland, 96
 London, England, 318

BOCAS DEL TORO, PANAMA
 (9°20'00" N., 82°14'00" W.) to:

Junction Points*
 Panama, Panama, 187

Ports
 Baltimore, Maryland, U.S.A., 1,975
 Boston, Massachusetts, U.S.A., 2,231
 Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,638
 Colon, Panama, 144
 Habana, Cuba, 981
 Halifax, Canada, 2,369
 Kingston, Jamaica, 604
 Mobile, Alabama, U.S.A., 1,340
 New Orleans, Louisiana, U.S.A. (via South Pass and inside route), 1,353
 New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2048
 Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,853
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 2,020
 Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,637

BODO, NORWAY
 (67°17'00" N., 14°22'30" E.) to:

Junction Points*
 Bishop Rock, England, 1,405

Ports
 Bergen, Norway, 521
 Kristiansand, Norway, 733
 Oslo, Norway, 885

BOLAMA, PORTUGUESE GUINEA
 (11°34'45" N., 15°31'30" W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 3,403
 Ushant, France, 2,422

Ports
 Dakar, Senegal, 272
 Takoradi, Ghana, 1,100

BOMA, REPUBLIC OF THE CONGO
 (5°51'30" S., 13°03'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 1,829

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Amboim, Angola, 356
 Bridgetown, Barbados, 4,478
 Cabinda, Cabinda, 89
 Cape Town, Republic of South Africa, 1,760
 Douala, Cameroon, 742
 Lagos, Nigeria, 977
 Luanda, Angola, 190
 New York, New York, U.S.A., 5,591
 Pointe Noire, Gabon, 140
 Port Gentil, Gabon, 470
 St. Helena Island, 1,232
 Santa Isabel, Fernando Poo, 689
 Sao Tome, Sao Tome, 563

BOMBAY, INDIA

(18°56'00" N., 72°51'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 4,059
 Cape of Good Hope, Republic of South Africa (east of Madagascar), 4,652
 Cape of Good Hope, Republic of South Africa (west of Madagascar), 4,597
 Cape of Good Hope, Republic of South Africa (low power, southwest monsoon, June–August), 4,679
 Port Said, U.A.R. (October–April), 3,049
 Port Said, U.A.R. (May–September), 3,068
 Port Said, U.A.R. (low power, southwest monsoon, June–August), 3,743
 Singapore, 2,441
 Sunda Strait, Indonesia, 2,664
 Torres Strait, Australia (via south of Java and Timor), 4,849

Ports

Ad Dammam, Saudi Arabia, 1,373
 Aden, Aden Protectorate (October–April), 1,657
 Aden, Aden Protectorate (low power, northwest monsoon, June–August), 2,356
 Al Basrah, Iraq, 1,594
 Antsirana, Malagasy Republic, 2,338
 Belawan, Indonesia, 2,109
 Bhavnagar, India, 204
 Calcutta, India, 2,128
 Cochin, India, 592
 Colombo, Ceylon, 895
 Darwin, Australia, 4,193
 Durban, Republic of South Africa, 3,826
 Fremantle, Australia, 3,984
 Galle, Ceylon, 944

Jazireh-ye Khark, Iran, 1,431
 Karachi, Pakistan, 504
 Khawr al Ama, Neutral Zone, Persian Gulf, 1,493
 Madras, India, 1,482
 Malacca, Malaysia, 2,327
 Masqat, Mascat and Oman, 852
 Massaua, Ethiopia, 2,050
 Mina Abd Allah, Kuwait, 1,514
 Mina al Ahmadi, Kuwait, 1,517
 Mina Su'ud, Neutral Zone, Persian Gulf, 1,495
 Mombasa, Kenya, 2,400
 Mombasa, Kenya (low power, southwest monsoon, June–August), 2,596
 Mormugao, India, 235
 Okha, India, 341
 Penang, Malaysia, 2,154
 Port Louis, Mauritius, 2,517
 Rangoon, Burma, 2,139
 Ra's al Khafji, Neutral Zone, Persian Gulf, 1,491
 Saban, Indonesia, 1,843
 Tamatave, Malagasy Republic, 2,621
 Trincomalee, Ceylon, 1,213
 Victoria, Seychelles, 1,749
 Zanzibar, Zanzibar (northeast monsoon), 2,549
 Zanzibar, Zanzibar (southwest monsoon), 2,683

BONE, ALGERIA. See Annaba.

BO'NESS, SCOTLAND

(56°01'12" N., 3°36'18" W.)

Add 5 miles to Rosyth distances.

BONIFACIO, CORSICA

(41°23'00" N., 9°09'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,307
 Strait of Gibraltar, 779

Ports

Civitavecchia, Italy, 131
 Genova, Italy, 199
 Marseille, France, 213

BONNY, NIGERIA

(4°27'21" N., 7°10'22" E.)

Subtract 28 miles from Port Harcourt distances.

BORDEAUX, FRANCE

(44°51'00" N., 0°34'00" W.) to:

Junction Points*

Bishop Rock, England, 397
 Cape of Good Hope, Republic of South Africa, 5,838
 Montreal, Canada (via Strait of Belle Isle), 3,045
 Montreal, Canada (tracks C and D, via Cabot Strait), 3,302
 Montreal, Canada (track E, via Cabot Strait), 3,167
 Montreal, Canada, (track F, via Cabot Strait), 3,146
 Panama, Panama (via Mona Passage), 4,641
 Punta Arenas, Chile, 7,074
 Strait of Gibraltar, 1,010
 Straits of Florida (track A), 4,165
 Straits of Florida (track B), 4,168
 Straits of Florida (tracks C and D), 4,172
 Straits of Florida (low power, May–September), 4,289
 Straits of Florida (low power, October–April), 4,350
 Ushant, France, 321

Ports

Aviles, Spain, 303
 Baltimore, Maryland, U.S.A. (track A), 3,590
 Baltimore, Maryland, U.S.A. (track B), 3,567
 Baltimore, Maryland, U.S.A. (track C), 3,529
 Bayonne, France, 172
 Belem, Brazil, 3,868
 Boston, Massachusetts, U.S.A. (track A), 3,157
 Boston, Massachusetts, U.S.A. (track B), 3,120
 Boston, Massachusetts, U.S.A. (track C), 3,063
 Buenos Aires, Argentina, 6009
 Cape Town, Republic of South Africa, 5,820
 Cayenne, French Guiana, 3,670
 Charleston, South Carolina, U.S.A. (track A), 3,713
 Charleston, South Carolina, U.S.A. (track B), 3,696
 Charleston, South Carolina, U.S.A. (track C), 3,670
 Colon, Panama (via Mona Passage), 4,593
 Colon, Panama (via Windward Passage), 4,643
 Colon, Panama (low power, May–September), 4,609

*JUNCTION POINT.—See Preface for use of junction points.

*JUNCTION POINT.—See Preface for use of junction points.

Lisboa, Portugal (track B), 2,830
 Lisboa, Portugal (tracks C and D), 2,801
 Liverpool, Canada, 317
 Luderitz Bay, Southwest Africa, 6,302
 Maracaibo, Venezuela, 2,001
 Montecristi, Dominican Republic, 1,415
 Montevideo, Uruguay, 5,728
 Murmansk, U.S.S.R., 3,719
 Nassau, Bahamas, 1,173
 Nuevitas, Cuba, 1,454
 Paramaribo, Surinam, 2,380
 Parrsboro, Canada, 349
 Pointe a Pitre, Guadeloupe, 1,742
 Ponce, Puerto Rico, 1,563
 Ponta Delgada, Azores (track A), 2,108
 Ponta Delgada, Azores (track B), 2,093
 Ponta Delgada, Azores (tracks C and D), 2,086
 Port Antonio, Jamaica (via Crooked Island Passage, and Windward Passage), 1,606
 Port au Prince, Haiti, 1,557
 Port of Spain, Trinidad, 2,022
 Progreso, Mexico, 1,838
 Puerto Cabello, Venezuela (via Mona Passage), 1,976
 Recife, Brazil, 3,669
 Reykjavik, Iceland (via Cape Race), 2,293
 Rio de Janeiro, Brazil, 4,739
 St. Georges, Grenada, 1,932
 St. John, Canada, 286
 St. John's, Canada, 885
 Salvador, Brazil, 4,060
 San Juan, Puerto Rico, 1,486
 Santa Cruz de Tenerife, Canary Islands, 2,777
 Santa Marta, Colombia (via Crooked Island Passage, and Windward Passage), 1,966
 Santiago de Cuba, Cuba (via Crooked Island Passage, and Windward Passage), 1,545
 Santo Domingo, Dominican Republic, 1,599
 Santos, Brazil, 4,928
 Sint Nicolaas, Aruba, 1,853
 Sydney, Canada, 597
 Vigo, Spain (track A), 2,832
 Vigo, Spain (track B), 2,799
 Vigo, Spain (tracks C and D), 2,755
 Walvisbaai, Southwest Africa, 6,131
 Willemstad, Curacao, 1,881
 Yarmouth, Canada, 237

BOUGIE, ALGERIA. See Bejaia.

BOULOGNE, FRANCE
 (50°43'30" N., 1°36'00" E.) to:

Junction Points*
 Bishop Rock, England, 322

Ports
 Cardiff, Wales, 431
 Glasgow, Scotland, 672
 Hull, England, 225
 Southampton, England, 120

BOWEN, AUSTRALIA
 (20°01'30" S., 148°15'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 2,975
 Torres Strait, Australia, 760

Ports
 Brisbane, Australia, 610
 Bunbury, Australia, 3,072
 Noumea, New Caledonia, 1,342

BRAKE, GERMANY
 (53°19'55" N., 8°29'30" E.)

Add 14½ miles to Bremerhaven distances.

BREMEN, GERMANY
 (53°06'30" N., 8°45'00" E.)

For ocean distances, add 34 miles to Bremerhaven distances.

BREMERHAVEN, GERMANY
 (53°33'00" N., 8°33'30" E.) to:

Junction Points*
 Bishop Rock, England, 657
 Kiel Canal (east end), Germany, 129
 Pentland Firth, Scotland, 507
 Skagens Odde, Denmark, 320
 Ushant, France, 647

Ports
 Aberdeen, Scotland, 425
 Amsterdam, Netherlands, 223
 Antwerpen, Belgium, 333
 Bergen, Norway, 447
 Cherbourg, France, 485
 Dover, England, 341
 Dundee, Scotland, 437
 Dunkerque, France, 321
 Egersund, Norway, 312
 Emden, Germany, 128
 Hakonsvern, Norway, 442

Hartlepool, England, 355
 Harwich, England, 309
 Hull, England, 332
 Inverness, Scotland, 514
 Kristiansand, Norway, 292
 LeHavre, France, 453
 Leith, Scotland, 442
 London, England, 375
 Narvik, Norway, 1,058
 Newcastle, England, 374
 Nieuwpoort, Belgium, 312
 Oostende, Belgium, 299
 Oslo, Norway, 427
 Plymouth, England, 573
 Portland, England, 499
 Portsmouth, England, 446
 Rotterdam, Netherlands, 256
 Sandefjord, Norway, 373
 Skien, Norway, 372
 Southampton, England, 464
 Stavanger, Norway, 366
 Zeebrugge, Belgium, 287

BREMERTON, WASHINGTON,
 U.S.A.
 (47°33'30" N., 122°38'00" W.)

For distances outside Puget Sound, add 9 miles to Seattle distances.

BRESKENS, NETHERLANDS
 (51°24'03" N., 3°34'27" E.)

Add 48½ miles to Antwerpen distances.

BREST, FRANCE
 (48°22'30" N., 4°33'00" W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,757
 Straits of Florida (track A), 3,961
 Straits of Florida (track B), 3,959
 Straits of Florida (track C), 3,953
 Ushant, France 55

Ports
 Baltimore, Maryland, U.S.A. (track A), 3,375
 Baltimore, Maryland, U.S.A., (track B), 3,347
 Baltimore, Maryland, U.S.A., (track C), 3,302
 Barrow in Furness, England, 416
 Boston, Massachusetts, U.S.A. (track A), 2,944
 Boston, Massachusetts, U.S.A. (track B), 2,903

*JUNCTION POINT.—See Preface for use of junction points.

Boston, Massachusetts, U.S.A. (track C), 2,838
 Cardiff, Wales, 277
 Charleston, South Carolina, U.S.A. (track A), 3,506
 Charleston, South Carolina, U.S.A. (track B), 3,486
 Charleston, South Carolina, U.S.A. (track C), 3,453
 Colon, Panama (via Mona Passage), 4,420
 Fishguard, Wales, 274
 Funchal, Madeira Island, 1,110
 Guantanamo, Cuba, 3,784
 Holyhead, Wales, 345
 Liverpool, England, 410
 New York, New York, U.S.A. (track A), 3,104
 New York, New York, U.S.A. (track B), 3,073
 New York, New York, U.S.A. (track C), 3,017
 Philadelphia, Pennsylvania, U.S.A. (track A), 3,243
 Philadelphia, Pennsylvania, U.S.A. (track B), 3,212
 Philadelphia, Pennsylvania, U.S.A. (track C), 3,160
 Reykjavik, Iceland, 1,193
 Rio de Janeiro, Brazil, 4,841
 Rotterdam, Netherlands, 457
 St. Malo, France, 152

BRIDGEPORT, CONNECTICUT, U.S.A.
 (41°10'18" N., 73°10'48" W.) to:

Junction Points*
 Panama, Panama, 2,118

Ports
 Habana, Cuba, 1,292
 Halifax, Canada, 552

BRIDGETOWN, BARBADOS
 (13°05'00" N., 59°37'00" W.) to:

Junction Points*
 Panama, Panama, 1,280
 Straits of Florida, 1,511
 Yucatan Channel, 1,549

Ports
 Baltimore, Maryland, U.S.A., 1,853
 Belem, Brazil, 1,154
 Boma, Republic of the Congo, 4,478
 Boston, Massachusetts, U.S.A., 1,899
 Castries, St. Lucia (north of St. Lucia, 110

Castries, St. Lucia (south of St. Lucia), 115
 Charleston, South Carolina, U.S.A., 1,628
 Charlotte Amalie, Virgin Islands, 442
 Colon, Panama, 1,237
 Fort de France, Martinique, 130
 Georgetown, British Guiana, 389
 Halifax, Canada, 1,906
 Hamilton, Bermuda, 1,208
 Jacksonville, Florida, U.S.A., 1,617
 Key West, Florida, U.S.A., 1,459
 Kingstown, St. Vincent, 98
 Montevideo, Uruguay, 4,096
 Nassau, Bahamas, 1,284
 New York, New York, U.S.A., 1,829
 Paramaribo, Surinam, 496
 Philadelphia, Pennsylvania, U.S.A., 1,839
 Port au Prince, Haiti, 1,070
 Port of Spain, Trinidad (via Boca Grande), 211
 Recife, Brazil, 2,054
 Rio de Janeiro, Brazil, 3,157
 St. Georges, Grenada (north of island), 144
 St. Georges, Grenada (south of island), 152
 Salvador, Brazil, 2,476
 San Juan, Puerto Rico (west of St. Croix Island and Virgin Passage), 517
 Santa Barbara de Samana, Dominican Republic, 675
 Savannah, Georgia, U.S.A., 1,646

BRINDISI, ITALY
 (40°38'30" N., 17°57'03" E.) to:

Junction Points*
 Port Said, U.A.R., 941
 Strait of Gibraltar, 1,315

Ports
 Alexandria, U.A.R., 831
 Alger, Algeria, 888
 Alicante, Spain, 1,042
 Ancona, Italy, 274
 Annaba, Algeria, 668
 Benghazi, Libya, 535
 Barcelona, Spain, 947
 Bayrut, Lebanon (via Corinth Canal), 980
 Bayrut, Lebanon (south of Greece), 1,011
 Bizerte, Tunisia, 577
 Cartagena, Spain, 1,073
 Ceuta, Morocco, 1,296
 Chioggia, Italy, 375
 Civitavecchia, Italy, 568
 Genova, Italy, 752

Gibraltar, 1,298
 Haifa, Israel (via Corinth Canal), 983
 Haifa, Israel (south of Greece), 1,007
 Iraklion, Crete, 496
 Istanbul, Turkey (via Corinth Canal), 697
 Istanbul, Turkey (south of Greece), 793
 Izmir, Turkey (via Corinth Canal), 543
 Izmir, Turkey (south of Greece), 639
 Kerkira, Greece, 123
 La Spezia, Italy, 717
 Livorno, Italy, 681
 Malaga, Spain, 1,245
 Marseille, France, 844
 Messina, Sicily, 270
 Napoli, Italy, 442
 Odessa, U.S.S.R. (via Corinth Canal), 1,045
 Odessa, U.S.S.R. (south of Greece), 1,142
 Oran, Algeria, 1,084
 Palermo, Sicily, 387
 Palma, Balearic Islands, 905
 Pescara, Italy, 209
 Piraievs, Greece (via Corinth Canal), 343
 Piraievs, Greece (south of Greece), 480
 Rijeka, Yugoslavia, 342
 Savona, Italy, 762
 Shengjin, Albania, 103
 Sibenik, Yugoslavia, 217
 Siracusa, Sicily, 292
 Split, Yugoslavia, 202
 Tarabulus, Libya, 555
 Taranto, Italy, 150
 Thessaloniki, Greece (via Corinth Canal), 592
 Thessaloniki, Greece (south of Greece), 688
 Toulon, France, 812
 Trieste, Free Territory, 376
 Tunis, Tunisia, 564
 Valencia, Spain, 1,048
 Valletta, Malta, 369
 Venezia, Italy, 386
 Volos, Greece (via Corinth Canal), 533
 Volos, Greece (south of Greece), 629
 Zadar, Yugoslavia, 280

BRISBANE, AUSTRALIA
 (27°28'00" S., 153°03'30" E.) to:

Junction Points*
 Panama, Panama, 7,687
 Punta Arenas, Chile (via Lat. 49° S.), 6,063
 Punta Arenas, Chile (via Lat. 30° S.), 7,369

Torres Strait, Australia (via inner route), 1,348
Wilson Promontory, Australia, 931

Ports

Apia, Samoa, 2,177
Apra, Guam, 2,659
Auckland, New Zealand, 1,340
Avarua, Cook Islands, 2,618
Bowen, Australia, 610
Cairns Harbor, Australia, 827
Catherine Hill Bay, Australia, 462
Christmas Island, North Pacific, 3,379
Dutch Harbor, Alaska, U.S.A., 5,369
Funafuti, Ellice Islands, 1,895
Gladstone Harbor, Australia, 314
Honolulu, Hawaii, U.S.A., 4,117
Jaluit, Marshall Islands, 2,231
Lae, New Guinea, 1,560
Lele, Caroline Islands, 2,097
Levuka, Fiji Islands, 1,569
Los Angeles, California, U.S.A., 6,274
Lucinda, Australia, 804
Mackay, Australia, 512
Malakal, Palau Islands, 2,642
Midway Island, 3,757
Nandi Bay, Fiji Islands, 1,618
Nelson, New Zealand, 1,380
Nonouti, Gilbert Islands, 2,032
Noumea, New Caledonia, 807
Nukualofa, Tonga Islands, 1,819
Omura, Bonin Islands, 3,455
Pago Pago, American Samoa, 2,221
Papeete, Society Islands, 3,234
Ponape, Caroline Islands, 2,108
Portland, Oregon, U.S.A., 6,421
Rabaul, New Britain, 1,434
Raoul Island, Kermadec Islands, 1,566
Rockhampton, Australia, 391
San Diego, California, U.S.A., 6,306
San Francisco, California, U.S.A., 6,193
Seattle, Washington, U.S.A., 6,471
Selwyn Bay, Solomon Islands, 1,193
Shang-hai, China, 4,243
Suva, Fiji Islands, 1,548
Sydney, Australia, 529
Talomako, New Hebrides, 1,132
Townsville, Australia, 677
Urangan, Australia, 282
Wellington, New Zealand, 1,453
Yokohama, Japan, 3,925

BRISTOL, ENGLAND

(51°27'00" N., 2°37'30" W.)

For ocean distances, add 6 miles to Avonmouth distances.

BRITO, NICARAGUA

(11°21'00" N., 85°59'00" W.) to:

Ports

Champerico, Guatemala, 399
Corinto, Nicaragua, 107
Guayaquil, Ecuador, 985
Honolulu, Hawaii, U.S.A., 4,155
Iquique, Chile, 2,189
Portland, Oregon, U.S.A., 3,333
San Diego, California, U.S.A., 2,307
San Francisco, California, U.S.A., 2,709

BROOKLYN, NEW YORK, U.S.A.

(40°40'00" N., 74°01'00" W.)

For ocean distances, subtract 1¼ miles from New York distances.

BROUTONA BUKHTA. See Bukhta Broutona.

BRUGGE, BELGIUM

(51°13'25" N., 3°13'25" E.)

Add 8 miles to Zeebrugge distances.

BRUNSWICK, GEORGIA, U.S.A.

(31°08'00" N., 81°29'40" W.) to:

Junction Points*

Montreal, Canada, 2,074
Panama, Panama (via Windward Passage and Crooked Island Passage), 1,581
Straits of Florida, 548

Ports

Belize, British Honduras (via Windward Passage), 1,661
Belize, British Honduras (via Straits of Florida), 1,072
Buenos Aires, Argentina, 5,845
Cape Town, Republic of South Africa, 6,857
Cartagena, Colombia, 1,417
Castries, St. Lucia, 1,529
Charlotte Amalie, Virgin Islands, 1,190
Colon, Panama (via Windward Passage, and Crooked Island Passage), 1,538
Halifax, Canada, 1,210
Kingston, Jamaica, 1,038
Las Palmas de Gran Canaria, Canary Islands, 3,442
Limon, Costa Rica, 1,611
Montevideo, Uruguay, 5,731
Port of Spain, Trinidad, 1,694
Recife, Brazil, 3,672
Rio de Janeiro, Brazil, 4,744

Salvador, Brazil, 4,063
San Juan, Puerto Rico, 1,132
Santiago de Cuba, Cuba, 926
Santo Domingo, Dominican Republic, 1,179
Tampico, Mexico, 1,387
Veracruz, Mexico, 1,351

BRUSSELS, BELGIUM

(50°50'00" N., 4°20'00" E.)

Add 29 miles to Antwerpen distances.

BRUXELLES, BELGIUM. See Brussels.

BUCKNER BAY, OKINAWA JIMA, RYUKYU ISLANDS. See Nakagusuku Wan.

BUENAVENTURA, COLOMBIA

(3°54'00" N., 77°04'30" W.) to:

Junction Points*

Panama, Panama, 352

Ports

Callao, Peru, 1,126
Golfito, Costa Rica, 426
Guayaquil, Ecuador, 578
La Libertad, Ecuador, 445
San Francisco, California, U.S.A., 3,383

BUENOS AIRES, ARGENTINA

(34°35'00" S., 58°22'00" W.) to:

Junction Points*

Bishop Rock, England, 5,947
Cape of Good Hope, Republic of South Africa, 3,704
Inishtrahull, Ireland, 6,243
Montreal, Canada, 6,455
Pentland Firth, Scotland, 6,491
Punta Arenas, Chile, 1,394
Strait of Gibraltar, 5,280
Straits of Florida, 5,713
Ushant, France, 5,916
Yucatan Channel, 5,723

Ports

Bahia Blanca, Argentina, 564
Baltimore, Maryland, U.S.A., 5,945
Belem, Brazil, 3,274
Bordeaux, France, 6,009
Boston, Massachusetts, U.S.A., 5,842
Brunswick, Georgia, U.S.A., 5,845
Cadiz, Spain, 5,293
Caleta Olivia, Argentina, 865

*JUNCTION POINT.—See Preface for use of junction points.

Cape Town, Republic of South Africa, 3,720
 Cartagena, Colombia, 5,154
 Castries, St. Lucia, 4,375
 Charleston, South Carolina, U.S.A., 5,822
 Charlotte Amalie, Virgin Islands, 4,648
 Charlottetown, Canada, 5,831
 Cienfuegos, Cuba, 5,526
 Colon, Panama, 5,385
 Comodoro Rivadavia, Argentina, 927
 Dakar, Senegal, 3,864
 Freetown, Sierra Leone, 3,712
 Funchal, Madeira Island, 4,823
 Georgetown, British Guiana, 3,954
 Guantanamo, Cuba, 5,213
 Habana, Cuba, 5,671
 Halifax, Canada, 5,731
 Hamilton, Bermuda, 5,211
 Horta, Azores, 4,997
 Jacksonville, Florida, U.S.A., 5,808
 Key West, Florida, U.S.A., 5,661
 Kingston, Jamaica, 5,224
 Lisboa, Portugal, 5,339
 Mar del Plata, Argentina, 276
 Natal, Brazil, 2,329
 New York, New York, U.S.A., 5,871
 Norfolk, Virginia, U.S.A., 5,824
 Paramaribo, Surinam, 3,813
 Philadelphia, Pennsylvania, U.S.A., 5,918
 Ponta Delgada, Azores, 4,975
 Port au Prince, Haiti, 5,258
 Port Gallegos, Argentina, 1,231
 Portland, Maine, U.S.A., 5,873
 Puerto Concepcion, Argentina, 806
 Puerto Cortes, Honduras, 5,909
 Puerto Deseado, Argentina, 965
 Puerto Madryn, Argentina, 748
 Quequen, Argentina, 350
 Recife, Brazil, 2,181
 Rio de Janeiro, Brazil, 1,151
 Rio Grande, Argentina, 1,306
 Rio Grande, Brazil, 440
 St. Helena Island, 3,052
 St. John, Canada, 5,853
 St. John's, Canada, 5,663
 Salvador, Brazil, 1,849
 San Juan, Puerto Rico, 4,713
 Santa Cruz de Tenerife, Canary Island, 4,619
 Santo Domingo, Dominican Republic, 4,881
 Santos, Brazil, 1,006
 Savannah, Georgia, U.S.A., 5,854
 Sydney, Canada, 5,749
 Ushuaia, Argentina, 1,447
 Vigo, Spain, 5,518
 Wilmington, North Carolina, U.S.A., 5,805

BUKHTA BROUTONA, KURIL ISLANDS
 (47°10'00" N., 152°14'30" E.) to:

Ports
 Aleksandrovsk, Sakhalin, 747
 Aomori, Japan, 664
 Attu Island, Alaska, U.S.A., 869
 Dutch Harbor, Alaska, U.S.A., 1,609
 Hakodate, Japan, 630
 Kholmsk, Sakhalin, 519
 Kiska, Alaska, U.S.A., 1,041
 Korsakov, Sakhalin, 431
 Muroran, Japan, 625
 Nemuro, Japan, 370
 Nikolayevsk, U.S.S.R. (north of Sakhalin), 715
 Otaru, Japan, 597
 Petropavlovsk, U.S.S.R., 451
 Vladivostok, U.S.S.R., 934
 Wakkanai, Japan, 456
 Zaliz Chikhacheva, U.S.S.R., 783

BUNBURY, AUSTRALIA
 (33°17'50" S., 115°38'40" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 97
 Lombok Strait, Indonesia, 1,510
 Port Said, U.A.R., 6,343

Ports
 Adelaide, Australia, 1,260
 Bowen, Australia, 3,072
 Darwin, Australia, 1,906

BUR, SUDAN. See Port Sudan.

BUR IBRAHIM, UNITED ARAB REPUBLIC
 (29°55'30" N., 32°32'30" E.)

For distances via Red Sea, subtract 88 miles from Port Said distances.

BUR SAFAJAH, UNITED ARAB REPUBLIC
 (26°44'00" N., 33°56'30" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,016
 Port Said, U.A.R., 310
 Singapore, 4,729

Ports
 Aden, Aden Protectorate, 1,109
 Port Sudan, Sudan, 508

BURKETOWN, AUSTRALIA
 (17°20'00" S., 140°03'00" E.) to:

Junction Points*
 Torres Strait, Australia, 432

Ports
 Fremantle, Australia (via Clarence Strait), 2,697

BURNIE HARBOR, AUSTRALIA
 (41°03'00" S., 145°55'00" E.) to:

Junction Points*
 Wilson Promontory, Australia, 116

Ports
 Hobart, Tasmania, 332
 Melbourne, Australia, 223
 Sydney, Australia, 525

BURNT ISLAND, SCOTLAND
 (56°03'00" N., 3°14'00" W.)

Subtract 8 miles from Rosyth distances.

BUROTON WAN. See Bukhta Brou-tona.

BUSHEHR, IRAN
 (28°58'30" N., 50°45'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,032
 Singapore, 3,737

Ports
 Bandar-e Shapur, Iran, 158
 Belawan, Indonesia, 3,372
 Calcutta, India, 3,414
 Darwin, Australia, 5,446
 Fremantel, Australia, 5,259
 Malacca, Malaysia, 3,590
 Penang, Malaysia, 3,417
 Rangoon, Burma, 3,425
 Sabang, Indonesia, 3,106

BUSHIRE, IRAN. See Bushehr.

BUTARITARI, GILBERT ISLANDS
 (3°03'00" N., 172°48'00" E.) to:

Junction Points*
 Panama, Panama, 6,515

Ports
 Honolulu, Hawaii, U.S.A., 2,050

*JUNCTION POINT.—See Preface for use of junction points.

<p>Los Angeles, California, U.S.A., 4,272 Pago Pago, American Samoa, 1,453 Papeete, Society Islands, 2,560 San Francisco, California, U.S.A., 4,122 Suva, Fiji Islands, 1,462</p> <p>CABEDELLO, BRAZIL (6°58'00" S., 34°50'40" W.) to:</p> <p>Junction Points* Cape of Good Hope, Republic of South Africa, 3,374 Panama, Panama, 3,149 Punta Arenas, Chile, 3,327</p> <p>Ports Belem, Brazil, 1,021 Salvador, Brazil, 468</p> <p>CABIMAS, VENEZUELA (10°23'00" N., 71°28'00" W.)</p> <p>Add 21 miles to Maracaibo distances.</p> <p>CABINDA, CABINDA (5°32'00" S., 12°11'00" E.) to:</p> <p>Ports Amboim, Angola, 339 Boma, Republic of the Congo, 89 Douala, Cameroon, 668 Port Gentil, Gabon, 393</p> <p>CADIZ, SPAIN (36°32'00" N., 6°17'00" W.) to:</p> <p>Junction Points* Bishop Rock, England, 930 Montreal, Canada (tracks C and D), 3,209 Montreal, Canada (track E), 3,131 Montreal, Canada (track F), 3,127 Strait of Gibraltar, 50 Straits of Florida, 3,978 Ushant, France, 894</p> <p>Ports Baltimore, Maryland, U.S.A. (track A), 3,438 Baltimore, Maryland, U.S.A. (track B), 3,434 Baltimore, Maryland, U.S.A. (track C), 3,437 Bathurst, Gambia, 1,587 Belem, Brazil, 3,286 Boston, Massachusetts, U.S.A. (track A), 3,008 Boston, Massachusetts, U.S.A. (track B), 2,990</p>	<p>Boston, Massachusetts, U.S.A. (track C), 2,972 Buenos Aires, Argentina, 5,293 Cape Town, Republic of South Africa, 5,078 Casablanca, Morocco, 192 Charleston, South Carolina, U.S.A. (track A), 3,561 Charleston, South Carolina, U.S.A. (track B), 3,563 Charleston, South Carolina, U.S.A. (track C), 3,578 Colon, Panama, 4,286 Dakar, Senegal, 1,500 Freetown, Sierra Leone, 1,979 Funchal, Madeira Island, 579 Halifax, Canada (direct), 2,617 Halifax, Canada (tracks C and D), 2,652 Horta, Azores, 1,070 Lisboa, Portugal, 253 New York, New York, U.S.A. (track A), 3,158 New York, New York, U.S.A. (track B), 3,151 New York, New York, U.S.A. (track C), 3,143 Norfolk, Virginia, U.S.A. (direct), 3,302 Norfolk, Virginia, U.S.A. (track A), 3,317 Norfolk, Virginia, U.S.A. (track B), 3,313 Norfolk, Virginia, U.S.A. (track C), 3,316 Philadelphia, Pennsylvania, U.S.A. (track A), 3,311 Philadelphia, Pennsylvania, U.S.A. (track B), 3,304 Philadelphia, Pennsylvania, U.S.A. (track C), 3,296 Ponta Delgada, Azores, 931 Porto, Portugal, 399 Porto Grande, Cape Verde Islands, 1,547 Recife, Brazil, 3,125 Rio de Janeiro, Brazil, 4,192 San Juan, Puerto Rico, 3,312 Santa Cruz de Tenerife, Canary Islands, 702 Santander, Spain, 789 Vigo, Spain, 463</p> <p>CAEN, FRANCE (49°11'00" N., 0°20'00" W.) to:</p> <p>Junction Points* Bishop Rock, England, 264 Ushant, France, 240</p>	<p>Ports Cherbourg, France, 73 Dover, England, 140 Southampton, England, 119</p> <p>CAGLIARI, SARDINIA (39°12'30" N., 9°06'30" E.) to:</p> <p>Junction Points* Port Said, U.A.R., 1,255 Strait of Gibraltar, 750</p> <p>Ports Alexandria, U.A.R., 1,136 Alger, Algeria, 332 Alicante, Spain, 473 Barcelona, Spain, 379 Bari, Italy, 652 Bizerte, Tunisia, 126 Cannes, France, 347 Castellamare di Stabia, Italy, 276 Catania, Sicily, 377 Ceuta, Morocco, 731 Civitavecchia, Italy, 239 Constanta, Rumania (via Corinth Canal), 1,289 Constanta, Rumania (south of Greece), 1,330 Genova, Italy, 359 Istanbul, Turkey (via Corinth Canal), 1,092 Istanbul, Turkey (south of Greece), 1,133 La Spezia, Italy, 336 Livorno, Italy, 304 Marseille, France, 360 Messina, Sicily, 328 Napoli, Italy, 272 Nice, France, 354 Oran, Algeria, 525 Palermo, Sicily, 221 Piraeus, Greece (via Corinth Canal), 738 Piraeus, Greece (south of Greece), 820 Savona, Italy, 362 Sete, France, 402 Toulon, France, 337 Tunis, Tunisia, 169 Valencia, Spain, 461 Valletta, Malta, 331 Venezia, Italy, 970 Volos, Greece (via Corinth Canal), 927 Volos, Greece (south of Greece), 969</p> <p>CAIBARIEN, CUBA (22°32'00" N., 79°28'00" W.) to:</p>
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*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Panama, Panama, 1,138
Straits of Florida, 252

Ports
Habana, Cuba, 208
Jacksonville, Florida, U.S.A., 526
Nuevitás, Cuba, 181

CAIRN RYAN, SCOTLAND
(54°58'00" N., 5°02'00" W.) to:

Junction Points*
Bishop Rock, England, 330
Fastnet, Ireland, 338
Inishtrahull, Ireland, 91
Pentland Firth, Scotland, 340

Ports
Glasgow, Scotland, 82

CAIRNS HARBOR, AUSTRALIA
(16°51'00" S., 145°49'00" E.) to:

Junction Points*
Torres Strait, Australia, 505
Wilson Promontory, Australia, 1,649

Ports
Brisbane, Australia, 827
Noumea, New Caledonia, 1,250
Wellington, New Zealand, 2,122

CALABAR, NIGERIA
(4°58'15" N., 8°19'00" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,458
Strait of Gibraltar, 3,420
Ushant, France, 4,054

Ports
Lagos, Nigeria, 391
Matadi, Republic of the Congo, 818

CALAIS, FRANCE
(50°58'00" N., 1°51'00" E.) to:

Junction Points*
Bishop Rock, England, 333
Kiel Canal (east end), Germany, 408
Ushant, France, 321

Ports
Bergen, Norway, 588
Egersund, Norway, 475

Kristiansand, Norway, 486
Oslo, Norway, 634
Plymouth, England, 244
Portland, England, 170
Stavanger, Norway, 515

CALCUTTA, INDIA
(22°33'00" N., 88°19'00" E.) to:

Junction Points*
Cape Leeuwin, Australia, 3,796
Cape of Good Hope, Republic of South Africa (November–March, east of Madagascar), 5,491
Cape of Good Hope, Republic of South Africa (May–September, east of Madagascar), 5,498
Cape of Good Hope, Republic of South Africa (April and October, west of Madagascar), 5,494
Lombok Strait, Indonesia (via Strait of Malacca and Selat Riouw), 2,614
Port Said, U.A.R. (October–April, south of Socotra), 4,695
Port Said, U.A.R. (May–September, south of Socotra), 4,816
Port Said, U.A.R. (May–September, north of Socotra), 4,712
Port Said, U.A.R. (Alternate, May–September, north of Socotra), 4,807
Port Said, U.A.R. (low power, May–September, south of Socotra), 4,876
Singapore, 1,649
Sunda Strait, Indonesia, 2,140

Ports
Aden, Aden Protectorate (October–April, south of Socotra), 3,308
Aden, Aden Protectorate (May–September, south of Socotra), 3,429
Aden, Aden Protectorate (Alternate, May–September, north of Socotra), 3,418
Aden, Aden Protectorate (low power, May–September, south of Socotra), 3,489
Akyab, Burma, 402
Al Bahrayn, Bahrain, 3,355
Al Basrah, Iraq, 3,593
Al Kuwayt, Kuwait, 3,504
Ao Phuket, Thailand, 1,124
Bassein, Burma, 643
Belawan, Indonesia, 1,326
Bombay, India, 2,128
Bushehr, Iran, 3,414
Chalna, Mungra Anchorage, Pakistan, 288
Chittagong, Pakistan, 367
Cocanada, India, 522
Colombo, Ceylon, 1,258
Dumai, Indonesia, 1,579

Fremantle, Australia, 3,693
Johore Bahru, Malaysia, 1,652
Karachi, Pakistan, 2,578
Madras, India, 769
Malacca, Malaysia, 1,523
Masqat, Mascat and Oman, 2,830
Massaua, Ethiopia (October–April), 3,695
Massaua, Ethiopia (Alternate, May–September), 3,808
Massaua, Ethiopia (May–September), 3,816
Massaua, Ethiopia (low power, May–September), 3,876
Mombasa, Kenya (via One and Half Degree Channel), 3,703
Moulmein, Burma, 824
Penang, Malaysia, 1,294
Port Blair, Andaman Islands, 775
Port Louis, Mauritius, 3,212
Port Swettenham, Malaysia, 1,444
Rangoon, Burma, 787
Sabang, Indonesia (via Duncan Passage), 1,131
Visakhapatnam, India, 458
Zanzibar, Zanzibar (via One and Half Degree Channel), 3,776

CALDERA, CHILE
(27°03'45" S., 70°50'30" W.) to:

Junction Points*
Panama, Panama, 2,302
Punta Arenas, Chile, 1,795

Ports
Antofagasta, Chile, 215
Arica, Chile, 522
Callao, Peru, 980
Coquimbo, Chile, 196
Guayaquil, Ecuador, 1,632
Iquique, Chile, 420
Lota, Chile, 628
Mollendo, Peru, 606
Pisco, Peru, 880
San Diego, California, U.S.A., 4,492
San Francisco, California, U.S.A., 4,894
Talcahuano, Chile, 602
Valparaiso, Chile, 376

CALDERA BAY, DOMINICAN REPUBLIC
(18°13'30" N., 70°31'30" W.) to:

Junction Points*
Panama, Panama, 810

Ports
Barranquilla, Colombia, 508
Kingston, Jamaica, 378

*JUNCTION POINT.—See Preface for use of junction points.

San Juan, Puerto Rico, 273
Willemstad, Curacao, 392

CALETA OLIVIA, ARGENTINA
(46°25'57'' S., 67°29'32'' W.) to:

Junction Points*
Panama, Panama, 6,204
Punta Arenas, Chile, 570

Ports
Buenos Aires, Argentina, 865
Stanley, Falkland Islands, 516

CALICUT, INDIA
(11°15'00'' N., 75°44'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 2,916
Singapore, 1,942

Ports
Belawan, Indonesia, 1,609
Darwin, Australia, 3,683
Fremantle, Australia, 3,484
Galle, Ceylon, 437
Malacca, Malaysia, 1,827
Penang, Malaysia, 1,654
Sebang, Indonesia, 1,343

CALLAO, PERU
(12°03'00'' S., 77°10'00'' W.) to:

Junction Points*
Panama, Panama, 1,350
Punta Arenas, Chile, 2,671
Torres Strait, Australia (via Raine Island entrance), 8,152
Wilson Promontory, Australia (via Cook Strait), 7,261

Ports
Acapulco, Mexico, 2,198
Amapala, Honduras, 1,665
Antofagasta, Chile, 813
Apia, Samoa, 5,492
Apra, Guam, 8,372
Archipelago de Colon, 1,004
Arica, Chile, 593
Auckland, New Zealand, 5,834
Avarua, Cook Islands, 4,733
Bahia Magdalena, Mexico, 3,008
Buenaventura, Colombia, 1,126
Caldera, Chile, 980
Chimbote, Peru, 206
Coquimbo, Chile, 1,136
Corinto, Nicaragua, 1,606
Corral, Chile, 1,691
Dutch Harbor, Alaska, U.S.A., 5,988

Esmeraldas, Ecuador, 909
Guayaquil, Ecuador, 712
Guaymas, Mexico, 3,117
Honolulu, Hawaii, U.S.A., 5,161
Iquique, Chile, 659
Jaluit, Marshall Islands, 6,832
La Libertad, Ecuador, 682
La Palma, Panama, 1,336
Levuka, Fiji Islands, 6,002
Los Angeles, California, U.S.A., 3,655
Lota, Chile, 1,530
Matarani, Peru, 462
Midway Island, 6,280
Mollendo, Peru, 468
Monterey, California, U.S.A., 3,907
Nome, Alaska, U.S.A., 6,578
Noumea, New Caledonia, 6,541
Omura, Bonin Islands, 8,420
Papeete, Society Islands, 4,192
Pedregal, Panama, 1,313
Pimentel, Peru, 363
Pisco, Peru, 128
Ponape, Caroline Islands, 7,515
Portland, Oregon, U.S.A., 4,611
Prince Rupert, Canada, 5,047
Puerto Masachapa, Nicaragua, 1,583
Puerto Somoza, Nicaragua, 1,608
Puntarenas, Costa Rica, 1,421
Quepos, Costa Rica, 1,387
Rabaul, New Britain, 7,713
Salaverry, Peru, 266
Salina Cruz, Mexico, 2,005
San Antonio, Chile, 1,328
San Blas, Mexico, 2,661
San Diego, California, U.S.A., 3,585
San Francisco, California, U.S.A., 3,989
San Jose, Guatemala, 1,763
San Juan, Peru, 248
San Lorenzo, Honduras, 1,701
Santa Barbara, California, U.S.A., 3,722
Seattle, Washington, U.S.A., 4,764
Seward, Alaska, U.S.A., 5,660
Sitka, Alaska, U.S.A., 5,255
Suva, Fiji Islands, 5,995
Talara, Peru, 534
Talacahuano, Chile, 1,508
Valparaiso, Chile, 1,306
Wellington, New Zealand, 5,721

CAMDEN, NEW JERSEY, U.S.A.
(39°57'00'' N., 75°08'00'' W.) to:

Use Philadelphia distances.

CAMP LLOYD, GREENLAND
(66°57'30'' N., 50°56'25'' W.) to:

Junction Points*
Pentland Firth, Scotland, 1,828
Strait of Gibraltar, 2,676

Ports
Churchill, Canada, 1,434
Reykjavik, Iceland, 1,274
St. John's, Canada, 1,198

CAMPBELLTOWN, NEW ZEALAND.
See Bluff Harbor.

CAMPECHE, MEXICO
(19°51'00'' N., 90°45'00'' W.) to:

Junction Points*
Panama, Panama, 1,210
Yucatan Channel, 291

Ports
Belize, British Honduras (west of Banco Chinchorro, and Isla de Cozumel), 609
Castries, St. Lucia, 1,848
Cienfuegos, Cuba, 691
Colon, Panama, 1,167
Galveston, Texas, U.S.A., 617
Gulfport, Mississippi, U.S.A., 652
Habana, Cuba, 561
Key West, Florida, U.S.A., 632
La Guaira, Venezuela, 1,635
Mobile, Alabama, U.S.A., 674
New Orleans, Louisiana (via South-west Pass), 650
Pensacola, Florida, U.S.A., 670
Pointe a Pitre, Guadeloupe, 1,806
Port au Prince, Haiti, 1,140
Port of Spain, Trinidad, 1,913
Puerto Cabello, Venezuela, 1,595
Santo Domingo, Dominican Republic, 1,364
Tampico, Mexico, 430
Tuxpan, Mexico, 375
Veracruz, Mexico, 307
Willemstad, Curacao, 1,527

CAMPHA, VIETNAM
(21°01'30'' N., 107°22'00'' E.)

Add 12 miles to Haiphong distances.

CAMRANH BAY, VIETNAM. See Vinh Cam Ranh.

CAN THO, VIETNAM
(10°02'00'' N., 105°48'00'' E.)

Via Vung Tau pilot station (10°20'30'' N., 107°04'00'' E.). Add 74½ miles to Sai Gon distances.

*JUNCTION POINT.—See Preface for use of junction points.

CANAKKLE, TURKEY

(40°09'00" N., 26°24'00" E.)

For ports outside the Black Sea and Sea of Marmara, subtract 133½ miles from Istanbul distances.

CANNES, FRANCE

(43°32'00" N., 7°01'03" E.) to:

Junction Points*

Port Said, U.A.R., 1,472
Strait of Gibraltar, 773

Ports

Alger, Algeria, 446
Cagliari, Sardinia, 347
Genova, Italy, 107
Livorno, Italy, 149
Napoli, Italy, 381
Oran, Algeria, 594
Palma, Balearic Islands, 357
Piraeus, Greece (via Corinth Canal), 942
Piraeus, Greece (south of Greece), 1,023
Sete, France, 171

CANTON, CHINA. See Kuang-Chou.

CANTON, PHOENIX ISLANDS

(2°48'00" S., 171°43'00" E.) to:

Junction Points*

Panama, Panama, 5,623

Ports

Apra, Guam, 2,789
Honolulu, Hawaii, U.S.A., 1,660
Howland Island, 367
Midway Island, 1,893
Pago Pago, American Samoa, 711
Palmyra Island, 775
Papeete, Society Islands, 1,581
San Diego, California, U.S.A., 3,755
San Francisco, California, U.S.A., 3,663
Seattle, Washington, U.S.A., 4,049
Wake Island, 1,843

CAP HAITIEN, HAITI

(19°46'00" N., 72°11'30" W.) to:

Junction Points*

Bishop Rock, England, 3,565
Panama, Panama, 860
Straits of Florida, 604

Ports

Alvaro Obregon, Mexico, 1,298
Baltimore, Maryland, U.S.A., 1,227
Belize, British Honduras, 950
Carmen, Mexico, 1,228
Cartagena, Colombia, 697
Castries, St. Lucia, 764
Charlotte Amalie, Virgin Islands, 442
Cienfuegos, Cuba, 543
Colon, Panama, 817
Dakar, Senegal, 3,154
Guantanamo, Cuba, 175
Gulfport, Mississippi, U.S.A., 1,145
Habana, Cuba, 631
Key West, Florida, U.S.A. (via Old Bahama Channel), 619
Kingston, Jamaica, 326
New York, New York, U.S.A., 1,283
Philadelphia, Pennsylvania, U.S.A., 1,245
Pointe a Pitre, Guadeloupe (via Mona Passage), 703
Pointe a Pitre, Guadeloupe (via Virgin Passage), 702
Ponta Delgada, Azores, 2,646
Port au Prince, Haiti, 195
Port of Spain, Trinidad, 888
Puerto Cabello, Venezuela, 752
San Juan, Puerto Rico, 372
Santo Domingo, Dominican Republic, 392
Willemstad, Curacao (via Windward Passage), 697
Willemstad, Curacao (via Mona Passage), 674

CAP SAINTE-JACQUES, VIETNAM.
See Vung Tau.

CAPE CHEL YUSKEN. See Mys Chelyuskin.

CAPE HAITIAN, HAITI. See Cap Haitian.

CAPE LEEUWIN, AUSTRALIA*
(34°32'00" S., 115°08'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa (via Lat. 30° S.), 5,068
Lombok Strait, Indonesia, 1,571
Port Said, U.A.R. (October–April), 6,345
Port Said, U.A.R. (May–September), 6,389
Sunda Strait, Indonesia, 1,815
Wilson Promontary, Australia, 1,524

Ports

Adelaide, Australia, 1,165
Aden, Aden Protectorate (north of Chagos Archipelago), 4,958
Aden, Aden Protectorate (south of Chagos Archipelago), 4,973
Albany, Australia, 168
Auckland, New Zealand, 3,029
Bluff Harbor, New Zealand, 2,484
Bombay, India, 4,059
Bowen, Australia, 2,975
Bunbury, Australia, 97
Calcutta, India, 3,796
Colombo, Ceylon, 3,203
Darwin, Australia, 1,978
Dunedin, New Zealand, 2,622
Flying Fish Cove, Christmas Island, Indian Ocean, 1,540
Fremantle, Australia, 181
Geraldton, Australia, 356
Gladstone Harbor, Australia, 2,688
Hobart, Tasmania, 1,628
Karachi, Pakistan, 4,512
Khawr al Ama, Neutral Zone, Persian Gulf, 5,416
Launceston, Tasmania, 1,577
Lyttelton, New Zealand, 2,792
Madras, India, 3,480
Massau, Ethiopia (October–April), 5,345
Massau, Ethiopia (May–September), 5,390
Melbourne, Australia, 1,497
Mina Abd Allah, Kuwait, 5,437
Mina al Ahmadi, Kuwait, 5,440
Mina Su'ud, Neutral Zone, Persian Gulf, 5,418
Nelson, New Zealand, 2,794
Port Augusta, Australia, 1,252
Port des Galets, Reunion Island, 3,241
Port Lincoln, Australia, 1,100
Port Louis, Mauritius (via rhumb line), 3,214
Port Refuge, Cocos Islands, 1,678
Portland, Australia, 1,304
Rangoon, Burma, 3,359
Rapid Bay, Australia, 1,131
Ra's al Khafji, Neutral Zone, Persian Gulf, 5,414
Ra's at Tannurah, Saudi Arabia, 5,316
Sabang, Indonesia, 2,711
Simons Bay, Republic of South Africa, 4,572
Stenhouse Bay, Australia, 1,077
Strahan, Australia, 1,492
Tjilatjap, Indonesia, 1,616
Townsville, Australia, 3,023
Umm Said, Qatar, 5,245
Wallaroo, Australia, 1,153
Wellington, New Zealand, 2,863
Yampi Sound, Australia, 1,588

*JUNCTION POINT.—See Preface for use of junction points.

**CAPE OF GOOD HOPE, REPUBLIC
OF SOUTH AFRICA***

(34°22'00'' S., 18°23'00'' E.) to:

Junction Points*

Bishop Rock, England, 5,790
Cape Leeuwin, Australia (via Lat. 41° S.), 4,660
Inishtrahull, Ireland, 6,141
Lombok Strait, Indonesia, 5,461
Montreal, Canada (via Cabot Strait), 7,134
Pentland Firth, Scotland, 6,389
Port Said, U.A.R., 5,367
Punta Arenas, Chile, 4,618
Singapore, 5,579
Strait of Gibraltar, 5,082
Straits of Florida, 6,770
Sunda Strait, Indonesia, 5,164
Torres Strait, Australia, 6,854
Ushant, France, 5,746

Ports

Abidjan, Ivory Coast, 2,712
Ad Dammam, Saudi Arabia, 4,960
Adelaide, Australia, 5,754
Aden, Aden Protectorate, 3,980
Aden, Aden Protectorate (alternate), 4,235
Agadir, Morocco, 4,719
Al Bahrayn, Bahrain, 4,957
Al Basrah, Iraq, 5,232
Al Gurdagah, U.A.R., 5,041
Al Hudaydah, Yemen, 4,137
Al Kuwayt, Kuwait, 5,141
Al Mukha, Yemen, 4,043
Albany, Australia, 4,740
Amboim, Angola, 1,530
Anecho, Togo, 747
Antsirana, Malagasy Republic, 2,313
Argentia, Canada, 6,294
Assab, Ethiopia, 4,056
Baltimore, Maryland, U.S.A., 6,924
Bandar-e Shahpur, Iran (inside Agulhas Current), 5,190
Bandar-e Shahpur, Iran (outside Agulhas Current), 5,395
Bata, Spanish Guinea, 2,291
Beira, Mozambique, 1,454
Belawan, Indonesia, 5,246
Belem, Brazil, 4,368
Bissau, Portuguese Guinea, 3,518
Bolama, Portuguese Guinea, 3,403
Boma, Republic of the Congo, 1,775
Bombay, India (west of Madagascar), 4,581
Bombay, India (east of Madagascar), 4,822
Bordeaux, France, 5,838
Boston, Massachusetts, U.S.A., 6,772
Brest, France, 5,757
Buenos Aires, Argentina, 3,815

Bur Safajah, U.A.R., 5,016
Bushehr, Iran, 5,053
Cabedelo, Brazil, 3,374
Calabar, Nigeria, 2,458
Calcutta, India (November–March, east of Madagascar), 5,603
Calcutta, India (May–September, east of Madagascar), 5,609
Calcutta, India (April and October, alternate, May–September, west of Madagascar), 5,604
Cape Town, Republic of South Africa, 35
Chalna, Mungla Anchorage, Pakistan, 5,458
Charleston, South Carolina, U.S.A., 6,838
Chittagong, Pakistan, 5,492
Clarence Bay, Ascension Island, 2,409
Cobh, Ireland, 5,892
Cocanada, India, 5,023
Colombo, Ceylon (November–March), 4,475
Colombo, Ceylon (May–September), 4,513
Colombo, Ceylon (April and October, alternate, May–September), 4,457
Colon, Panama, 6,444
Cotonou, Dahomey, 857
Dakar, Senegal, 3,610
Dar es Salaam, Tanganyika, 2,330
Darwin, Australia, 6,100
Djibouti, French Somaliland, 4,089
Durban, Republic of South Africa, 764
East London, Republic of South Africa, 508
Eilat, Israel, 5,155
El Jadida, Morocco, 4,941
Fedala, Morocco, 4,951
Flying Fish Cove, Christmas Island, Indian Ocean, 4,923
Fort Dauphin, Malagasy Republic, 1,614
Freetown, Sierra Leone, 3,190
Fremantle, Australia, 4,755
Funchal, Madeira Island, 4,689
Georgetown, British Guiana, 5,026
Greenville, Liberia, 2,826
Halifax, Canada, 6,502
Hamilton, Bermuda, 6,169
Horta, Azores, 5,152
Inhambane, Mozambique, 1,228
Jacksonville, Florida, U.S.A., 6,862
Jazireh-ye Khark, Iran, 5,018
Karachi, Pakistan, 4,668
Kenitra, Morocco, 5,056
Khawr Al Ama, Neutral Zone, Persian Gulf, 5,080
Larache, Morocco, 5,049
Lindi, Tanganyika, 2,155
Lisboa, Portugal, 5,152
Lobito, Angola, 1,440

Longji Cameroon, 2,359
Lourenco Marques, Mozambique, 1,057
Luanda, Angola, 1,627
Luderitz Bay, Southwest Africa, 511
Madras, India (November–March, east of Madagascar), 4,956
Madras, India (May–September, east of Madagascar), 4,963
Madras, India (April and October, alternate, May–September, west of Madagascar), 4,957
Malacca, Malaysia, 5,464
Manakara, Malagasy Republic, 1,779
Marshall, Liberia, 2,927
Masqat, Mascot and Oman, 4,464
Massaua, Ethiopia, 4,367
Mayumba, Gabon, 1,942
Miami, Florida, U.S.A., 6,685
Mina Abd Allah, Kuwait, 5,101
Mina Al Ahmadi, Kuwait, 5,104
Mina Su'ud, Neutral Zone, Persian Gulf, 5,082
Mocambique, Mozambique, 1,807
Mocamedes, Angola, 1,239
Mogadiscio, Somali Republic, 2,855
Mombasa, Kenya, 2,472
Montevideo, Uruguay, 3,701
Mormugao, India, 4,447
Mosselbaai, Republic of South Africa, 206
Mtwara, Tanganyika, 2,111
New York, New York, U.S.A., 6,801
Norfolk, Virginia, U.S.A., 6,802
Padang, Indonesia, 4,979
Paranagua, Brazil, 3,496
Penang, Malaysia, 5,291
Philadelphia, Pennsylvania, U.S.A., 6,874
Port Blair, Andaman Island, 5,075
Port Buchanan, Liberia, 2,919
Port des Galets, Reunion Island, 2,120
Port Elizabeth, Republic of South Africa, 390
Port Etienne, Mauritania, 4,018
Port Louis, Mauritius, 2,382
Port Nolloth, Republic of South Africa, 325
Port of Spain, Trinidad, 5,337
Port Refuge, Cocos Islands, 4,428
Porto Alegre, Brazil, 3,625
Porto Grande, Cape Verde Islands, 3,958
Portsmouth, New Hampshire, U.S.A., 6,732
Quelimane, Mozambique, 1,569
Rabat, Morocco, 5,036
Rangoon, Burma (November–March, east of Madagascar), 5,610
Rangoon, Burma (May–September, east of Madagascar), 5,593

*JUNCTION POINT.—See Preface for use of junction points.

Rangoon, Burma (April and October, alternate, May–September, west of Madagascar), 5,615
 Ra's al Khafji, Neutral Zone, Persian Gulf, 5,078
 Ra's as Sidr, U.A.R., 5,189
 Ra's at Tannurah, Saudi Arabia, 4,980
 Ra's Gharib, U.A.R., 5,114
 Recife, Brazil, 3,324
 Rio de Janeiro, Brazil, 3,323
 River Cess, Liberia, 2,874
 Sabang, Indonesia, 4,980
 Safi, Morocco, 4,870
 Santa Cruz de Tenerife, Canary Islands, 4,453
 Simons Bay, Republic of South Africa, 23
 Stanley, Falkland Islands, 4,141
 Suakin, Sudan, 4,538
 Sulima, Sierra Leone, 3,060
 Swakopmund, Republic of South Africa, 743
 Tabu, Ivory Coast, 2,751
 Tamatave, Malagasy Republic, 2,104
 Tanga, Tanganyika, 2,425
 Tema, Ghana, 2,619
 Tulear, Malagasy Republic, 1,509
 Umm Said, Qatar, 4,909
 Victoria, Cameroon, 2,399
 Victoria, Seychelles, 2,892
 Zanzibar, Zanzibar, 2,358
 CAPE ST. JACQUES, VIETNAM. See Vung Tau.

CAPE TOWN, REPUBLIC OF SOUTH AFRICA
 (33°54'00" S., 18°26'00" E.) to:

Junction Points*
 Bishop Rock, England, 5,772
 Cape of Good Hope, Republic of South Africa, 35
 Montreal, Canada (via Cabot Strait), 7,118
 Panama, Panama, 6,472
 Punta Arenas, Chile, 4,631
 Strait of Gibraltar, 5,064
 Straits of Florida, 6,766
 Ushant, France, 5,743
 Yucatan Channel, 6,776

Ports
 Abidjan, Ivory Coast, 2,679
 Baltimore, Maryland, U.S.A., 6,912
 Boma, Republic of the Congo, 1,760
 Bordeaux, France, 5,820
 Boston, Massachusetts, U.S.A., 6,707
 Brunswick, Georgia, U.S.A., 6,857
 Buenos Aires, Argentina, 3,831
 Cadiz, Spain, 5,078
 Charleston, South Carolina, U.S.A., 6,830
 Cienfuegos, Cuba, 6,580

Cobh, Ireland, 5,894
 Colon, Panama, 6,429
 Dakar, Senegal, 3,593
 El Ferrol del Caudillo, Spain, 5,421
 Freetown, Sierra Leone, 3,164
 Funchal, Madeira Island, 4,680
 Guantanamo, Cuba, 6,260
 Habana, Cuba, 6,724
 Halifax, Canada, 6,490
 Jacksonville, Florida, U.S.A., 6,854
 Kingston, Jamaica, 6,278
 Lisboa, Portugal, 5,134
 Luanda, Angola, 1,601
 Luderitz Bay, Southwest Africa, 479
 Montevideo, Uruguay, 3,608
 New York, New York, U.S.A., 6,786
 Norfolk, Virginia, U.S.A., 6,790
 Philadelphia, Pennsylvania, U.S.A., 6,867
 Ponta Delgada, Azores, 5,040
 Port Nolloth, Republic of South Africa, 301
 Portland, Maine, U.S.A., 6,709
 Recife, Brazil, 3,318
 Rio de Janeiro, Brazil, 3,273
 St. Helena Island, 1,697
 St. John, Canada, 6,667
 St. John's, Canada, 5,205
 San Juan, Puerto Rico, 5,767
 Santa Cruz de Tenerife, Canary Islands, 4,435
 Santo Domingo, Dominican Republic, 5,934
 Santos, Brazil, 3,409
 Savannah, Georgia, U.S.A., 6,864
 Swakopmund, Republic of South Africa, 719
 Sydney, Canada, 6,425
 Vigo, Spain, 5,322
 Willemstad, Curacao, 5,740
 Wilmington, North Carolina, U.S.A., 6,804

CARDENAS, CUBA
 (23°03'30" N., 81°11'30" W.) to:

Junction Points*
 Straits of Florida, 140
 Yucatan Channel, 269

Ports
 Cienfuegos, Cuba, 905
 Guantanamo, Cuba, 539
 Habana, Cuba, 88
 Hamilton, Bermuda, 1,122
 Kingston, Jamaica, 703
 Philadelphia, Pennsylvania, U.S.A., 1,124
 Port au Prince, Haiti, 603
 San Juan, Puerto Rico, 917
 Santo Domingo, Dominican Republic, 887

CARDIFF, WALES

(51°27'00" N., 3°09'00" W.) to:

Junction Points*
 Bishop Rock, England, 176
 Fastnet, Ireland, 246
 Pentland Firth, Scotland, 609

Ports
 Barrow in Furness, England, 273
 Belfast, Ireland, 293
 Boulogne, France, 431
 Brest, France, 277
 Cherbourg, France, 309
 Cobh, Ireland, 204
 Douglas, Isle of Man, 246
 Dublin, Ireland, 205
 Fishguard, Wales, 130
 Glasgow, Scotland, 375
 Holyhead, Wales, 202
 Liverpool, England, 267
 London, England, 526
 Londonderry, Ireland, 369
 Southampton, England, 346
 Swansea, Wales, 46
 Workington, England, 299

CARIPITO, VENEZUELA

(10°09'15" N., 63°02'00" W.)
 Add 5 miles to Guanoco distances.

CARMEN, MEXICO

(18°38'00" N., 91°50'00" W.) to:

Junction Points*
 Panama, Panama, 1,289

Ports
 Apalachicola, Florida, U.S.A., 756
 Belize, British Honduras (west of Banco Chinchoro and Isla de Cozumel), 688
 Cap Haitien, Haiti, 1,228
 Castries, St. Lucia, 1,927
 Charlotte Amalie, Virgin Islands (via Yucatan Channel and Windward Passage), 1,658
 Charlotte Amalie, Virgin Islands (via Yucatan Channel and south of Hispaniola), 1,675
 Cienfuegos, Cuba, 770
 Colon, Panama, 1,246
 Galveston, Texas, U.S.A., 661
 Gulfport, Mississippi, U.S.A., 725
 Habana, Cuba, 639
 Key West, Florida, U.S.A., 708
 Kingston, Jamaica, 1,056
 La Guaira, Venezuela, 1,714
 Mobile, Alabama, U.S.A., 749
 New Orleans, Louisiana, U.S.A., 723

*JUNCTION POINT.—See Preface for use of junction points.

Pensacola, Florida, U.S.A., 745
 Pointe a Pitre, Guadeloupe, 1,885
 Port au Prince, Haiti, 1,219
 Port of Spain, Trinidad, 1,992
 Santo Domingo, Dominican Republic, 1,437
 Tampico, Mexico, 401
 Tuxpan, Mexico, 333
 Veracruz, Mexico, 242
 Willemstad, Curacao, 1,599

CARTAGENA, COLOMBIA

(10°24'20" N., 75°32'00" W.) to:

Junction Points*

Bishop Rock, England, 4,138
 Panama, Panama, 324
 Strait of Gibraltar, 4,087
 Yucatan Channel, 891

Ports

Alvaro Obregon, Mexico, 1,407
 Apalachicola, Florida, U.S.A., 1,366
 Belize, British Honduras, 904
 Bluefields, Nicaragua, 497
 Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 2,036
 Brunswick, Georgia, U.S.A., 1,417
 Buenos Aires, Argentina, 5,240
 Cap Haitien, Haiti, 697
 Castries, St. Lucia, 933
 Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,443
 Charlotte Amalie, Virgin Islands, 811
 Cienfuegos, Cuba, 778
 Colon, Panama, 281
 Galveston, Texas, U.S.A., 1,583
 Great Harbor, Culebra Island (via South Channel), 803
 Guantanamo, Cuba, 586
 Gulfport, Mississippi, U.S.A., 1,449
 Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,142
 Jacksonville, Florida, U.S.A., 1,395
 Key West, Florida, U.S.A. (via Windward Passage and Old Bahama Channel), 1,130
 Kingston, Jamaica, 479
 La Guaira, Venezuela, 612
 Limon, Costa Rica, 447
 Maracaibo, Venezuela, 465
 Mobile, Alabama, U.S.A., 1,450
 New Orleans, Louisiana, U.S.A. (via Yucatan Channel and Southwest Pass), 1,468
 New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 1,853

Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,658
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 1,825
 Pointe a Pitre, Guadeloupe, 941
 Porlamar, Margarita, Venezuela, 785
 Port au Prince, Haiti, 639
 Port of Spain, Trinidad, 932
 Portsmouth, New Hampshire, U.S.A. (via Windward Passage and Crooked Island Passage), 2,053
 Puerto Barrios, Guatemala, 901
 Puerto Cortes, Honduras, 854
 Puerto Mexico, Mexico, 1,484
 Punta Cardon, Venezuela, 397
 San Juan, Puerto Rico, 782
 San Juan del Norte, Nicaragua, 495
 Santo Domingo, Dominican Republic, 610
 Savannah, Georgia, U.S.A., 1,442
 Tampa, Florida, U.S.A., 1,295
 Tampico, Mexico, 1,575
 Tuxpan, Mexico, 1,545
 Veracruz, Mexico, 1,510
 Washington, D.C., U.S.A. (via Windward Passage and Crooked Island Passage), 1,794
 Willemstad, Curacao, 471
 Wilmington, North Carolina, U.S.A., 1,494

CARTAGENA, SPAIN

(37°35'44" N., 0°59'00" W.) to:

Junction Points*

Port Said, U.A.R., 1,705
 Strait of Gibraltar, 259

Ports

Alexandria, U.A.R., 1,585
 Algeciras, Spain, 238
 Alger, Algeria, 208
 Ancona, Italy, 1,338
 Annaba, Algeria, 440
 Banghazi, Libya, 1,119
 Barcelona, Spain, 282
 Bari, Italy, 1,131
 Bayrut, Lebanon, 1,797
 Bizerte, Tunisia, 532
 Brindisi, Italy, 1,073
 Castellamare di Stabia, Italy, 761
 Ceuta, Morocco, 240
 Dubrovnik, Yugoslavia, 1,177
 Genova, Italy, 616
 Gibraltar, 241
 Haifa, Israel, 1,794
 Iraklion, Crete, 1,279
 Istanbul, Turkey (via Corinth Canal), 1,567

Istanbul, Turkey (south of Greece), 1,573
 Izmir, Turkey (via Corinth Canal), 1,413
 Izmir, Turkey (south of Greece), 1,430
 La Spezia, Italy, 640
 Livorno, Italy, 636
 Malaga, Spain, 189
 Marseille, France, 460
 Messina, Sicily, 806
 Napoli, Italy, 756
 Odessa, U.S.S.R. (via Corinth Canal), 1,915
 Odessa, U.S.S.R. (south of Greece), 1,932
 Oran, Algeria, 115
 Palermo, Sicily, 697
 Palma, Balearic Islands, 222
 Piraeus, Greece (via Corinth Canal), 1,214
 Piraeus, Greece (south of Greece), 1,271
 Rijeka, Yugoslavia, 1,405
 Savona, Italy, 601
 Sibenik, Yugoslavia, 1,279
 Siracusa, Sicily, 817
 Skikda, Algeria, 395
 Split, Yugoslavia, 1,264
 Tarabulus, Libya, 856
 Taranto, Italy, 1,025
 Thessaloniki, Greece (via Corinth Canal), 1,462
 Thessaloniki, Greece (south of Greece), 1,479
 Toulon, France, 471
 Trieste, Free Territory, 1,439
 Tunis, Tunisia, 583
 Valencia, Spain, 152
 Valletta, Malta, 768
 Venezia, Italy, 1,449
 Volos, Greece (via Corinth Canal), 1,403
 Volos, Greece (south of Greece), 1,420

CARUPANO, VENEZUELA

(10°41'00" N., 63°15'00" W.) to:

Junction Points*

Panama, Panama, 1,088
 Yucatan Channel, 1,451

Ports

Barranquilla, Colombia, 734
 Port of Spain, Trinidad, 109
 Santiago de Cuba, Cuba, 1,009

CASABLANCA, MOROCCO

(33°37'00" N., 7°36'00" W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
 Strait of Gibraltar, 166
 Ushant, France, 960

Ports
 Agadir, Morocco, 257
 Amboim, Angola, 3,945
 Cadiz, Spain, 192
 Ceuta, Morocco, 189
 Dakar, Senegal, 1,333
 Freetown, Sierra Leone, 1,812
 Funchal, Madeira Island, 476
 Gijon, Spain, 763
 Lisboa, Portugal, 324
 Ponta Delgada, Azores, 915
 Port Etienne, Mauritania, 1,032
 Porto Grande, Sao Vicente, Cape Verde Islands, 1,387
 Rota, Spain, 202
 Safi, Morocco, 134
 Santa Cruz de Tenerife, Canary Islands, 548
 Setubal, Portugal, 313
 Tangier, Morocco, 166
 Vigo, Spain, 545
 Villa Rial de Santo Antonio, Portugal, 218
 Villa Cisneros, Spanish Sahara, 769

CASILDA, CUBA
 (21°45'00'' N., 79°59'20'' W.) to:

Junction Points*
 Panama, Panama, 792
 Yucatan Channel, 307

Ports
 Barranquilla, Colombia, 732
 Kingston, Jamaica, 372
 Santiago de Cuba, Cuba, 288

CASTELLAMARE, ITALY. See Castellamare Di Stabia.

CASTELLAMARE DI STABIA, ITALY
 (40°41'45'' N., 14°28'28'' E.) to:

Junction Points*
 Port Said, U.A.R., 1,114
 Strait of Gibraltar, 1,006

Ports
 Alexandria, U.A.R., 1,003
 Cagliari, Sardinia, 276
 Cartagena, Spain, 761
 Istanbul, Turkey (via Corinth Canal), 937

Istanbul, Turkey (south of Greece), 979
 La Spezia, Italy, 308
 Palermo, Sicily, 168
 Toulon, France, 430

CASTRIES, ST. LUCIA
 (14°01'00'' N., 61°00'00'' W.) to:

Junction Points*
 Bishop Rock, England, 3,405
 Inishtrahull, Ireland, 3,499
 Montreal, Canada, 2,642
 Panama, Panama, 1,203
 Pentland Firth, Scotland, 3,704
 Punta Arenas, Chile, 5,451
 Strait of Gibraltar, 3,236
 Straits of Florida (via Mona Passage), 1,409
 Yucatan Channel, 1,452

Ports
 Alvaro Obregon, Mexico, 2,000
 Baltimore, Maryland, U.S.A., 1,741
 Belem, Brazil, 1,265
 Belize, British Honduras, 1,609
 Boston, Massachusetts, U.S.A., 1,812
 Bridgetown, Barbados, (north of St. Lucia), 110
 Bridgetown, Barbados (south of St. Lucia), 115
 Brunswick, Georgia, U.S.A., 1,529
 Buenos Aires, Argentina, 4,375
 Campeche, Mexico, 1,848
 Cap Haitien, Haiti, 767
 Carmen, Mexico, 1,927
 Cartagena, Colombia, 933
 Charleston, South Carolina, U.S.A., 1,532
 Charlotte Amalie, Virgin Islands, 346
 Cienfuegos, Cuba, 1,246
 Colon, Panama, 1,160
 Dakar, Senegal, 2,543
 Elizabeth Harbor, Bahamas, 1,049
 Fort de France, Martinique, 37
 Georgetown, British Guiana, 482
 Guantanamo, Cuba, 922
 Habana, Cuba (via Mona Passage), 1,370
 Halifax, Canada, 1,850
 Hamilton, Bermuda, 1,149
 Horta, Azores, 2,265
 Jacksonville, Florida, U.S.A., 1,520
 Key West, Florida, U.S.A. (via Mona Passage), 1,358
 Kingston, Jamaica, 950
 Kingstown, St. Vincent, 60
 La Guaira, Venezuela, 405
 Limon, Costa Rica, 1,316
 Lisboa, Portugal, 3,111

Miami, Florida, U.S.A., 1,352
 Montevideo, Uruguay, 4,261
 New York, New York, U.S.A., 1,747
 Norfolk, Virginia, U.S.A., 1,620
 Philadelphia, Pennsylvania, U.S.A., 1,753
 Pointe a Pitre, Guadeloupe, 141
 Port au Prince, Haiti, 950
 Port of Spain, Trinidad (east of Grenadine Islands), 231
 Port of Spain, Trinidad (west of Grenadine Islands), 230
 Portsmouth, New Hampshire, U.S.A., 1,822
 Puerto Cabello, Venezuela, 465
 Puerto Cortes, Honduras, 1,578
 Recife, Brazil, 2,202
 Rio de Janeiro, Brazil, 3,274
 St. Johns, Antigua, 204
 St. Pierre, Martinique, 46
 Salvador, Brazil, 2,593
 San Juan, Puerto Rico (west of Saint Croix and Virgin Passage), 418
 San Juan del Norte, Nicaragua, 1,344
 Santo Domingo, Dominican Republic, 578
 Savannah, Georgia, U.S.A., 1,548
 Sint Nicolaas, Aruba, 532
 Sydney, Canada, 1,967
 Tuxpan, Mexico, 2,136
 Willemstad, Curacao, 489

CATANIA, SICILY
 (37°29'35'' N., 15°05'46'' E.) to:

Junction Points*
 Port Said, U.A.R., 942
 Strait of Gibraltar, 1,081

Ports
 Ajaccio, Corsica, 464
 Alexandria, U.A.R., 828
 Almeria, Spain, 919
 Banghazi, Libya, 406
 Cagliari, Sardinia, 377
 Genova, Italy, 535
 Istanbul, Turkey (via Corinth Canal), 776
 Istanbul, Turkey (south of Greece), 810
 Kerkira, Greece, 290
 Livorno, Italy, 464
 Malaga, Spain, 1,012
 Marseille, France, 627
 Messina, Sicily, 53
 Napoli, Italy, 225
 Palermo, Sicily, 170
 Pula, Yugoslavia, 594

CASTRIES BAY, U.S.S.R. See Zaliv Chikhacheva.

*JUNCTION POINT.—See Preface for use of junction points.

CATHERINE HILL BAY, AUSTRALIA

(33°09'15" S., 151°38'30" E.) to:

Junction Points*

Torres Strait, Australia, 1,738
Wilson Promontory, Australia, 467

Ports

Brisbane, Australia, 462
Hobart, Tasmania, 677
Port Moresby, Papua, 1,695

CATIA LA MAR, VENEZUELA

(10°36'30" N., 67°03'00" W.) to:

Junction Points*

Panama, Panama, 873
Yucatan Channel, 1,240

Ports

Barranquilla, Colombia, 524
Port of Spain, Trinidad, 335
San Juan, Puerto Rico, 556

CATTARO, YUGOSLAVIA. See Kotor.

CAVITE, LUZON, PHILIPPINES

(14°30'00" N., 120°56'00" E.)

Subtract 3 miles from Manila distances.

CAYENNE, FRENCH GUIANA

(5°02'00" N., 52°16'00" W.) to:

Junction Points*

Panama, Panama, 2,308
Straits of Florida (via Mona Passage), 2,177

Ports

Baltimore, Maryland, U.S.A., 2,468
Belem, Brazil, 516
Bordeaux, France, 3,670
Boston, Massachusetts, U.S.A., 2,499
Colon, Panama, 2,265
Dakar, Senegal, 2,140
Fort de France, Martinique, 782
Hamilton, Bermuda, 1,801
Natal, Brazil, 1,250
New York, New York, U.S.A., 2,447
Paramaribo, Surinam, 224
Philadelphia, Pennsylvania, U.S.A., 2,468
Pointe a Pitre, Guadeloupe, 867

CEARA, BRAZIL. See Fortaleza.

CEBU, CEBU, PHILIPPINES

(10°17'30" N., 123°54'30" E.) to:

Junction Points*

Lombok Strait, Indonesia, 1,278
Singapore, Malaysia, 1,355

Ports

Apra, Guam, 1,344
Batangas, Philippines, 309
Da Nang, Vietnam, 1,049
Davao, Philippines, 439
Djakarta, Indonesia (via Lumbucan Channel), 1,563
Haiphong, Vietnam (via Jintotolo Channel, Romblon Island, Verde Island Passage, and south of Hainan Tao), 1,276
Hakodate, Japan, 2,177
Hong Kong, B.C.C. (via Verde Island Passage and Jintotolo Channel), 960
Honolulu, Hawaii, U.S.A., 4,610
Hsia-men, China (via Balintang Channel), 965
Iloilo, Philippines, 176
Inchon, Korea, 1,656
Kobe, Japan, 1,601
Kuang-chou, China (via Verde Island Passage and Jintotolo Channel), 1,043
Lo-hsing-ta Mao-ti, China (via Balintang Channel), 1,051
Lu-shun, China, 1,754
Manila, Philippines (via Verde Island Passage and Jintotolo Channel), 391
Nagasaki, Japan, 1,406
Pei-hai, China, 1,220
Petropavlovsk, U.S.S.R., 3,101
Portland, Oregon, U.S.A., 6,001
Pulupandan, Philippines, 225
Sai Gon, Vietnam (via Jintotolo Channel and Mindoro Strait, north of North Danger Reef), 1,152
Shang-hai, China (via San Bernardino Strait, Steep Island Pass, and Pai-chieh Hsia), 1,322
Shimonoseki, Japan, 1,547
Shan-tou, China (via Verde Island Passage and Jintotolo Channel), 952
Ta-ku, China, 1,907
Tan-shui, Taiwan (via Peng-hu Lieh Tao and Balintang Channel), 1,006
Vladivostok, U.S.S.R., 2,026
Wei-hai-wei, China, 1,679
Yen-tai, China, 1,713

Yokohama, Japan, 1,762
Zamboanga, Philippines, 252

CEKHIRA, TUNISIA. See As Sukhayrah.

CEUTA, MOROCCO

(35°53'25" N., 5°18'45" W.) to:

Junction Points*

Port Said, U.A.R., 1,923
Strait of Gibraltar, 23

Ports

Alexandria, U.A.R., 1,802
Alger, Algeria, 417
Alicante, Spain, 299
Ancona, Italy, 1,561
Annaba, Algeria, 656
Banghazi, Libya, 1,336
Barcelona, Spain, 515
Bari, Italy, 1,354
Bayrut, Lebanon, 2,014
Bizerte, Tunisia, 750
Brindisi, Italy, 1,296
Cagliari, Sardinia, 731
Cartagena, Spain, 240
Casablanca, Morocco, 189
Genova, Italy, 849
Haifa, Israel, 2,012
Iraklion, Crete, 1,496
Istanbul, Turkey (via Corinth Canal), 1,785
Istanbul, Turkey (south of Greece), 1,802
Izmir, Turkey (via Corinth Canal), 1,630
Izmir, Turkey (south of Greece), 1,648
La Spezia, Italy, 872
Livorno, Italy, 868
Marseille, France, 692
Melilla, Morocco, 131
Messina, Sicily, 1,029
Napoli, Italy, 982
Odessa, U.S.S.R. (via Corinth Canal), 2,133
Odessa, U.S.S.R. (south of Greece), 2,150
Oran, Algeria, 232
Palermo, Sicily, 921
Palma, Balearic Islands, 452
Piraeus, Greece (via Corinth Canal), 1,431
Piraeus, Greece (south of Greece), 1,488
Rijeka, Yugoslavia, 1,628
Savona, Italy, 834
Sibenik, Yugoslavia, 1,502
Siracusa, Sicily, 1,035

*JUNCTION POINT.—See Preface for use of junction points.

Split, Yugoslavia, 1,487
 Tangier, Morocco, 29
 Tarabulus, Libya, 1,074
 Taranto, Italy, 1,249
 Thessaloniki, Greece (via Corinth Canal), 1,679
 Thessaloniki, Greece (south of Greece), 1,696
 Toulon, France, 704
 Trieste, Free Territory, 1,662
 Tunis, Tunisia, 801
 Valencia, Spain, 385
 Valletta, Malta, 986
 Venezia, Italy, 1,672
 Volos, Greece (via Corinth Canal), 1,620
 Volos, Greece (south of Greece), 1,637

CHALNA, MUNGLA ANCHORAGE, PAKISTAN
 (22°28'00'' N., 89°35'00'' E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,458
 Port Said, U.A.R., 4,705
 Singapore, 1,578

Ports
 Calcutta, India, 288
 Penang, Malaysia, 1,228

CHAMPERICO, GUATEMALA
 (14°17'30'' N., 91°56'00'' W.) to:

Junction Points*
 Panama, Panama, 954

Ports
 Acapulco, Mexico, 494
 Brito, Nicaragua, 399
 La Libertad, Mexico, 1,606
 Mazatlan, Mexico, 1,078

CHANARAL, CHILE
 (26°21'00'' S., 70°39'30'' W.) to:

Ports
 Antofagasta, Chile, 173
 Arica, Chile, 478
 Valparaiso, Chile, 416

CHANARAL DE LAS ANIMAS, CHILE. See Chanaral.

CHAN-CHIANG, CHINA
 (21°11'30'' N., 110°24'00'' E.) to:

Junction Points*
 Singapore, 1,333

Sunda Strait, Indonesia, 1,710

Ports
 Hong Kong, B.C.C., 245
 Sai Gon, Vietnam, 838

CHANGJON, KOREA
 (38°44'00'' N., 128°12'45'' E.) to:

Ports
 Hakodate, Japan, 638
 Maizuru, Japan, 411
 Pusan, Korea, 268
 Shimonoseki, Japan, 337
 Vladivostok, U.S.S.R., 319

CHANG-KAN, CHINA
 (19°06'30'' N., 108°37'00'' E.) to:

Junction, Points*
 Sunda Strait, Indonesia, 1,588

Ports
 Haiphong, Vietnam, 156
 Hong Kong, B.C.C., 408
 Kao-hsiung Chiang, Taiwan, 811
 Sai Gon, Vietnam, 708

CHARLESTON, SOUTH CAROLINA, U.S.A.
 (32°47'00'' N., 79°55'00'' W.) to:

Junction Points*
 Bishop Rock, England (track A), 3,448
 Bishop Rock, England (track B), 3,422
 Bishop Rock, England (track C), 3,375
 Cape of Good Hope Republic of South Africa, 6,838
 Fastnet, Ireland (track A), 3,347
 Fastnet, Ireland (track B), 3,318
 Fastnet, Ireland (track C), 3,262
 Inishtrahull, Ireland (track A), 3,473
 Inishtrahull, Ireland (track B), 3,437
 Inishtrahull, Ireland (track C), 3,360
 Montreal, Canada (via Strait of Canso), 1,940
 Panama, Panama, 1,607
 Pentland Firth, Scotland (track A), 3,687
 Pentland Firth, Scotland (track B), 3,641
 Pentland Firth, Scotland (track C), 3,540
 Punta Arenas, Chile, 6,898
 Strait of Gibraltar (track A), 3,594
 Straits of Florida, 637
 Yucatan Channel, 819

Ports
 Angmagssalik, Greenland (direct), 2,752
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,766
 Antilla, Cuba (via Crooked Island Passage), 813
 Argentia, Canada, 1,489
 Arkhangelsk, U.S.S.R., 4,692
 Banes, Cuba (via Crooked Island Passage), 802
 Barranquilla, Colombia, 1,391
 Belem, Brazil, 2,786
 Bocas del Toro, Panama, 1,638
 Bordeaux, France, (track A), 3,733
 Bordeaux, France, (track B), 3,712
 Bordeaux, France, (track C), 3,683
 Brest, France (track A), 3,530
 Brest, France (track B), 3,506
 Brest, France (track C), 3,465
 Bridgetown, Barbados, 1,628
 Buenos Aires, Argentina, 5,817
 Cadiz, Spain, 3,563
 Cape Town, Republic of South Africa, 6,830
 Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,443
 Castries, St. Lucia, 1,532
 Charlotte Amalie, Virgin Islands, 1,192
 Charlottetown, Canada, 1,313
 Cienfuegos, Cuba (via Crooked Island Passage and Windward Passage), 1,264
 Cienfuegos, Cuba (southbound, via Straits of Florida and Yucatan Channel), 1,104
 Colon, Panama (via Yucatan Channel), 1,636
 Colon, Panama (via Crooked Island Passage and Windward Passage), 1,564
 Dakar, Senegal, 3,557
 Elizabeth Harbor, Bahamas, 610
 Gibara, Cuba (via Crooked Island Passage), 806
 Great Harbor, Culebra Island, 1,176
 Guantanamo, Cuba (via Crooked Island Passage and Windward Passage), 900
 Habana, Cuba (southbound, via Straits of Florida), 648
 Halifax, Canada, 1,077
 Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,064
 La Guaira, Venezuela, 1,549
 Lagos, Nigeria, 5,065
 Las Palmas de Gran Canaria, Canary Islands, 3,341

*JUNCTION POINT.—See Preface for use of junction points.

Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 1,637
 Lisboa, Portugal, 3,397
 Manzanillo, Cuba (via Crooked Island Passage, Windward Passage, and Canal de Balandras), 1,105
 Maracaibo, Venezuela, 1,467
 Montevideo, Uruguay, 5,708
 Nassau, Bahamas, 507
 Nuevitas, Cuba (via Crooked Island Passage), 865
 Nuevitas, Cuba (via Straits of Florida, Nicholas Channel and Old Bahama Channel, southbound), 763
 Pointe a Pitre, Guadeloupe, 1,443
 Ponce, Puerto Rico, 1,168
 Ponta Delgada, Azores, 2,644
 Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,013
 Port au Prince, Haiti, 961
 Port of Spain, Trinidad, 1,682
 Recife, Brazil, 3,649
 Rio de Janeiro, Brazil, 4,717
 Salvador, Brazil, 4,040
 San Juan, Puerto Rico, 1,138
 Santa Cruz de Tenerife, Canary Islands, 3,275
 Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,373
 Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 952
 Santo Domingo, Dominican Republic, 1,190
 Santos, Brazil, 4,908
 Willemstad, Curacao (via Mona Passage), 1,472
 Willemstad, Curacao (via Windward Passage), 1,446

CHARLESTOWN, NEVIS
 (17°08'30" N., 62°38'00" W.) to:

Ports
 Hamilton, Bermuda, 937
 New York, New York, U.S.A., 1,539
 St. Johns, Antigua, 48

CHARLOTTE AMALIE, ST. THOMAS, VIRGIN ISLANDS
 (18°20'00" N., 64°56'00" W.) to:

Junction Points*
 Bishop Rock, England, 3,369
 Fastnet, Ireland, 3,279
 Inishtrahull, Ireland, 3,427
 Montreal, Canada (via Strait of Canso), 2,405

Panama, Panama, 1,072
 Pentland Firth, Scotland, 3,616
 Punta Arenas, Chile, 5,765
 Strait of Gibraltar, 3,323
 Straits of Florida, 1,087
 Yucatan Channel, 1,200

Ports

Alvaro Obregon, Mexico (north of Hispaniola), 1,726
 Alvaro Obregon, Mexico (south of Hispaniola), 1,747
 Baltimore, Maryland, U.S.A., 1,417
 Belem, Brazil, 1,598
 Belize, British Honduras, 1,368
 Boston, Massachusetts, U.S.A., 1,513
 Bridgetown, Barbados, 442
 Brunswick, Georgia, U.S.A., 1,190
 Buenos Aires, Argentina, 4,689
 Cap Haitien, Haiti, 442
 Carmen, Mexico (via Yucatan Channel and Windward Passage), 1,658
 Carmen, Mexico (south of Hispaniola and via Yucatan Channel), 1,675
 Cartagena, Colombia, 811
 Castries, St. Lucia, 346
 Charleston, South Carolina, U.S.A., 1,192
 Charlottetown, Canada, 1,778
 Cienfuegos, Cuba, 973
 Colon, Panama, 1,029
 Dakar, Senegal, 2,751
 Elizabeth Harbor, Bahamas, 704
 Georgetown, British Guiana, 814
 Guantanamo, Cuba (north of Hispaniola and Virgin Passage), 607
 Habana, Cuba, 1,048
 Halifax, Canada, 1,595
 Hamilton, Bermuda, 872
 Jacksonville, Florida, U.S.A., 1,181
 Key West, Florida, U.S.A., 1,036
 Kingston, Jamaica, 705
 La Guaira, Venezuela, 479
 Las Palmas de Gran Canaria, Canary Islands, 2,791
 Lisboa, Portugal, 3,147
 Miami, Florida, U.S.A., 991
 Montevideo, Uruguay, 4,575
 New Amsterdam, British Guiana, 903
 New York, New York, U.S.A., 1,434
 Norfolk, Virginia, U.S.A., 1,296
 Pedernales, Venezuela, 562
 Philadelphia, Pennsylvania, U.S.A., 1,434
 Pointe a Pitre, Guadeloupe, 267
 Port au Prince, Haiti, 628
 Port of Spain, Trinidad, 518
 Portland, Maine, U.S.A., 1,557
 Portsmouth, New Hampshire, U.S.A., 1,534
 Puerto Cabello, Venezuela, 506
 Puerto Cortes, Honduras, 1,343

Recife, Brazil, 2,516
 Rio de Janeiro, Brazil, 3,588
 Salvador, Brazil, 2,907
 San Juan del Norte, Nicaragua, 1,199
 Santa Barbara de Samana, Dominican Republic, 261
 Santa Cruz de Tenerife, Canary Islands, 2,764
 Santo Domingo, Dominican Republic, 300
 Savannah, Georgia, U.S.A., 1,210
 Tuxpan, Mexico (via Yucatan Channel and north of Hispaniola), 1,867
 Tuxpan, Mexico (via Old Bahama Channel), 1,890
 Willemstad, Curacao, 457

CHARLOTTETOWN, CANADA
 (46°14'00" N., 63°07'00" W.) to:

Junction Points*
 Montreal, Canada, 708
 Panama, Panama (via Strait of Canso, Crooked Island Passage and Windward Passage), 2,578
 Punta Arenas, Chile, 6,907

Ports
 Baltimore, Maryland, U.S.A., 1,142
 Boston, Massachusetts, U.S.A. (via Strait of Canso), 621
 Buenos Aires, Argentina, 5,831
 Charleston, South Carolina, U.S.A., 1,313
 Charlotte Amalie, Virgin Islands, 1,778
 Colon, Panama (via Strait of Canso, Crooked Island Passage, and Windward Passage), 2,535
 Habana, Cuba, 1,846
 Halifax, Canada, 268
 Key West, Florida, U.S.A., 1,788
 Montevideo, Uruguay, 5,717
 New York, New York, U.S.A. (via strait of Canso), 832
 Philadelphia, Pennsylvania, U.S.A., 982
 Portland, Maine, U.S.A. (via Strait of Canso), 579
 Recife, Brazil, 3,658
 Rio de Janeiro, Brazil, 4,730
 Salvador, Brazil, 4,049
 Savannah, Georgia, U.S.A., 1,386

CHATHAM, ENGLAND
 (51°24'00" N., 0°33'00" E.)

Subtract 23 miles from London distances.

CHEFOO, CHINA. See Yen-tai.

*JUNCTION POINT.—See Preface for use of junction points.

CHEMULPO, KOREA. See Inchon.

CHEN-CHIANG, CHINA
(32°13'00" N., 119°27'00" E.)

Add 139 miles to Shang-hai distances
for ports outside the Chang Chiang
(Yangtze River.)

CHERBOURG, FRANCE
(49°39'00" N., 1°37'00" W.) to:

Junction Points*
Bishop Rock, England, 197
Kiel Canal (east end), Germany, 554
Skagens Odde, Denmark, 671

Ports
Amsterdam, Netherlands, 305
Antwerpen, Belgium, 281
Barrow in Furness, England, 448
Bergen, Norway, 734
Bremerhaven, Germany, 488
Caen, France, 73
Cardiff, Wales, 309
Cobh, Ireland, 315
Dieppe, France, 105
Dover, England, 146
Dunkerque, France, 179
Egersund, Norway, 621
Emden, Germany, 428
Esbjerg, Denmark, 514
Fecamp, France, 79
Fishguard, Wales, 306
Hamburg, Germany, 543
Holyhead, Wales, 377
Kristiansand, Norway, 632
Liverpool, England, 442
Oostende, Belgium, 203
Olso, Norway, 784
Rotterdam, Netherlands, 282
Stavanger, Norway, 661
Wilhelmshaven, Germany, 472
Zeebrugge, Belgium, 218

CHESTER, PENNSYLVANIA, U.S.A.
(39°50'00" N., 75°22'00" W.)

Subtract 15 miles from Philadelphia
distances.

CHICHI-SHIMA, NAMPO-SHOTO,
JAPAN. See Omura.

CHIKHACHEVA ZALIV. See Zaliv
Chikhacheva.

CHI-LUNG CHIANG, TAIWAN
(25°08'10" N., 121°44'00" E.) to:

Ports
Hsia-men, China, 227
Macau, China, 516
Misumi, Japan, 654
Naha, Ryukyu Islands, 337
San-men Wan, China, 248
Shang-hai, China, 447
Ta-ku, China, 1,013
Ta-lien, China, 852
Uno, Japan, 903
Yu-lin Chiang, Hainan-tao, China,
830
Yung-chia, China, 204

CHIMBOTE, PERU
(9°05'00" S., 78°36'00" W.) to:

Junction Points*
Panama, Panama, 1,158
Punta Arenas, Chile, 2,843

Ports
Apra, Guam, 8,264
Callao, Peru, 206
Honolulu, Hawaii, U.S.A., 5,015
Pago Pago, American Samoa, 5,389
Papeete, Society Islands, 4,157
San Diego, California, U.S.A., 3,402
San Francisco, California, U.S.A.,
3,804
Valparaiso, Chile, 1,490
Wellington, New Zealand, 5,781

CHIMU WAN, OKINAWA JIMA,
RYUKYU ISLANDS
(26°25'00" N., 128°00'00" E.) to:

Junction Points*
Singapore, 2,046

Ports
Apra, Guam, 1,228
Manila, Philippines, 947
Shang-hai, China, 527
Yokohama, Japan, 830

CHING-TAO, CHINA
(36°05'30" N., 120°19'00" E.) to:

Junction Points*
Panama, Panama, 8,575
Singapore, 2,466

Ports
Aleksandrovsk, Sakhalin, 1,602
Apra, Guam, 1,900
Auckland, New Zealand, 5,378
Chin-huang-tao, China, 381
Chinnampo, Korea, 309
Darwin, Australia, 3,062
Dutch Harbor, Alaska, U.S.A., 3,385

Guayaquil, Ecuador, 8,880
Hai-kou, Hai-nan Tao (north of Tai-
wan), 1,370
Hong Kong, B.C.C., 1,120
Honolulu, Hawaii, U.S.A., 4,456
Hu-lu Tao, China, 414
Hua-lien Chiang, Taiwan, 792
Inchon, Korea, 333
Kodiak, Alaska, U.S.A., 3,975
Lo-hsing-ta Mao-ti, China, 715
Lu-shun, China, 280
Manila, Philippines, 1,422
Midway Island, 3,303
Mokpo, Korea, 336
Nikolayevsk, U.S.S.R., 1,750
Noumea, New Caledonia, 4,416
Pago Pago, American Samoa, 4,969
Palmyra Island, 4,660
Papeete, Society Islands, 6,046
Petropavlovsk, U.S.S.R., 2,215
Pusan, Korea, 497
Rabaul, New Britain, 3,043
Sai Gon, Vietnam, 1,969
San Diego, California, U.S.A., 5,805
San Francisco, California, U.S.A.,
5,403
San-men Wan, China, 528
Shang-hai, China, 401
Sitka, Alaska, U.S.A., 4,454
Su-ao Chiang, Taiwan, 756
Surabaya, Indonesia, 2,864
Suva, Fiji Islands, 4,662
Sydney, Australia, 4,871
Tai-tung Chiang, Taiwan, 870
Ta-ku, China, 436
Ta-lien, China, 277
Tasa Do, Korea, 339
Truk, Caroline Islands, 2,459
Valparaiso, Chile, 10,274
Vladivostok, U.S.S.R., 998
Wake Island, 2,614
Wei-hai-wei, China, 205
Wonsan, Korea, 802
Yen-tai, China, 239
Yokohama, Japan, 1,160
Yung-chia, China, 623

CHINHAE, KOREA
(35°08'40" N., 128°28'35" E.)

Subtract 3 miles from Masan distan-
ces.

CHIN-HUANG-TAO, CHINA
(39°55'00" N., 119°36'30" E.) to:

Ports
Aleksandrovsk, Sakhalin, 1,755
Ching-tao, China, 381
Chinnampo, Korea, 307
Hsia-men, China, 1,114

*JUNCTION POINT.—See Preface for use of junction points.

Inchon, Korea, 406
 Lo-hsing-ta Mao-ti, China (via Steep Island Pass), 977
 Lu-shun, China, 113
 Mokpo, Korea (south of Kasa Do), 484
 Nagasaki, Japan, 702
 Petropavlovsk, U.S.S.R., 2,368
 Pusan, Korea, 650
 Shang-hai, China, 668
 Ta-ku, China, 131
 Ta-lien, China, 145
 Vladivostok, U.S.S.R. (via Maenggol Sudo), 1,151
 Wei-hai-wei, China, 191
 Wonsan, Korea, 995
 Yen-tai, China, 168

CHINNAMPO, KOREA
 (38°43'00" N., 125°25'00" E.) to:

Junction Points*
 Lombok Strait, Indonesia, 2,946
 Singapore, 2,621
 Sunda Strait, Indonesia, 2,974
 Wetar Passage, Indonesia (via Selat Manipa), 2,861

Ports
 Aleksandrovsk, Sakhalin, 1,601
 Ching-tao, China, 309
 Chin-huang-tao, China, 307
 Djakarta, Indonesia, 2,955
 Hong Kong, B.C.C. 1,263
 Honolulu, Hawaii, U.S.A., 4,417
 Hsia-men, China, 1,004
 Inchon, Korea, 216
 Krung Thep, Thailand (outer bar), 2,652
 Lo-hsing-ta Mao-ti, China, 879
 Los Angeles, California, U.S.A., 5,711
 Lu-shun, China, 201
 Manila, Philippines, 1,559
 Mokpo, Korea (via Myondo Sudo), 288
 Mokpo, Korea (south of Kasa Do), 320
 Petropavlovsk, U.S.S.R., 2,214
 Pusan, Korea (via Maenggol Sudo), 496
 Sai Gon, Vietnam, 2,118
 Shang-hai, China, 561
 Shan-tou, China, 1,113
 Ta-ku, China, 369
 Ta-lien, China, 180
 Tongyong, Korea, 446
 Vladivostok, U.S.S.R., 997
 Wei-hai-wei, China, 172
 Wonsan, Korea (via Maenggol Sudo), 801

Yen-tai, China, 205
 Yokohama, Japan, 1,109

CHIN WAN, OKINAWA JIMA, RYUKYU ISLANDS. See Chimu Wan.

CHINWANGTAO, CHINA. See Chin-huang-tao.

CHIOGGIA, ITALY
 (45°14'00" N., 12°17'30" E.) to:

Junction Points*
 Port Said, U.A.R., 1,307
 Strait of Gibraltar, 1,682

Ports
 Ancona, Italy, 111
 Brindisi, Italy, 375
 Rijeka, Yugoslavia, 126

CHITTAGONG, PAKISTAN
 (22°18'45" N., 91°49'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,492
 Port Said, U.A.R., 4,739
 Singapore, 1,517

Ports
 Calcutta, India, 367
 Penang, Malaysia, 1,167

CH'ONGJIN, KOREA
 (41°46'30" N., 129°49'30" E.) to:

Ports
 Hakodate, Japan, 509
 Maizuru, Japan, 463
 Pusan, Korea, 417
 Shimonoseki, Japan, 480
 Vladivostok, U.S.S.R., 135

CHOSEN, KOREA. See Changjon.

CHRISTCHURCH, NEW ZEALAND.
 See Lyttelton.

CHRISTIANSAAAB, GREENLAND
 (68°49'00" N., 51°11'30" W.) to:

Junction Points*
 Pentland Firth, Scotland, 1,963
 Strait of Gibraltar, 2,679

Ports
 Churchill, Canada, 1,523
 Reykjavik, Iceland, 1,278
 St. John's Canada, 1,333

CHRISTIANSTED, ST. CROIX
 (17°45'20" N., 64°42'00" W.) to:

Junction Points*
 Bishop Rock, England, 3,370

Ports
 Great Harbor, Culebra Island, 50
 Guantanamo, Cuba (north of Hispaniola and Virgin Passage), 635
 Horta, Azores, 2,259
 Key West, Florida, U.S.A. (via Old Bahama Channel and Virgin Passage), 1,064
 New York, New York, U.S.A. (via Virgin Passage), 1,465
 San Juan, Puerto Rico, 104
 Santa Barbara de Samana, Dominican Republic, 289

CHRISTMAS ISLAND, NORTH PACIFIC
 (1°58'00" N., 157°28'00" W.) to:

Junction Points*
 Panama, Panama, 4,751

Ports
 Apia, Samoa, 1,274
 Apra, Guam, 3,518
 Brisbane, Australia, 3,379
 Enderbury Island, Phoenix Islands, 878
 Honolulu, Hawaii, U.S.A., 1,161
 Jarvis Island, 209
 Johnston Island, 1,137
 Midway Island, 1,949
 Pago Pago, American Samoa, 1,256
 Palmyra Island, 368
 Papeete, Society Islands, 1,266
 Pearl Harbor, Hawaii, U.S.A., 1,157
 San Francisco, California, U.S.A., 2,895

CHURCHILL, CANADA
 (58°46'40" N., 94°11'42" W.) to:

Junction Points*
 Inishtrahull, Ireland (via 75 miles off Kap Farvel), 2,760

*JUNCTION POINT.—See Preface for use of junction points.

Pentland Firth, Scotland (via 75 miles off Kap Farvel), 2,820

Ports

Camp Lloyd, Greenland, 1,434
Christianshaab, Greenland, 1523
Egedesminde, Greenland, 1485
Faeringehavn, Greenland, 1,326
Frederiksdal, Greenland, 1527
Godthaab, Greenland, 1,331
Goose Bay, Canada, 1,557
Gronne Dal, Greenland, 1,418
Holsteinsborg, Greenland, 1,384
Jakobshavn, Greenland, 1,532
Nanortalik, Greenland, 1,511
Narsarsuak, Greenland, 1,513
Qutdligssat, Greenland, 1,666
Reykjavik, Iceland (via 75 miles off Kap Farvel), 2,290
Ritenbenk, Greenland, 1,695
Shelburne, Canada, 2,467
Sukkertoppen, Greenland, 1,341
Thule, Greenland, 1,909
Upervik, Greenland, 1,669

CIENFUEGOS, CUBA

(22°08'30" N., 80°27'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 4,056
Fastnet, Ireland (track A), 3,954
Fastnet, Ireland (track B), 3,950
Inishtrahull, Ireland (track A), 4,080
Inishtrahull, Ireland (track B), 4,070
Inishtrahull, Ireland (track C), 4,054
Panama, Panama, 815
Pentland Firth, Scotland (track A), 4,285
Pentland Firth, Scotland (track B), 4,269
Pentland Firth, Scotland (track C), 4,234
Strait of Gibraltar, 4,102
Yucatan Channel, 285

Ports

Almirante, Panama, 788
Baltimore, Maryland, U.S.A., 1,578
Barranquilla, Colombia, 755
Belem, Brazil, 2,527
Belize, British Honduras, 545
Boston, Massachusetts, U.S.A. (via Yucatan Channel), 1,903
Buenos Aires, Argentina, 5,590
Campeche, Mexico, 691
Cap Haitien, Haiti, 543
Cape Town, Republic of South Africa, 6,610
Cardenas, Cuba, 905
Carmen, Mexico, 770

Cartagena, Colombia, 778
Castries, St. Lucia, 1,246
Charleston, South Carolina, U.S.A. (via Straits of Florida), 1,107
Charlotte Amalie, Virgin Islands, 973
Colon, Panama, 772
Covenas, Colombia, 814
Fort de France, Martinique, 1,240
Galveston, Texas, U.S.A., 989
Guantanamo, Cuba, 366
Gulfport, Mississippi, U.S.A., 851
Habana, Cuba, 482
Halifax, Canada (via Straits of Florida), 2,102
Hamilton, Bermuda, 1,346
La Guaira, Venezuela, 1,050
Manzanillo, Cuba, 266
Matanzas, Cuba, 526
Miami, Florida, U.S.A., 683
Montego Bay, Jamaica, 262
Nassau, Bahamas, 868
New York, New York, U.S.A., 1,657
Norfolk, Virginia, U.S.A., 1,456
Nuevitas, Cuba, 649
Pensacola, Florida, U.S.A., 825
Philadelphia, Pennsylvania, U.S.A. (via Yucatan Channel), 1,627
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,654
Pina, Panama, 777
Pointe a Pitre, Guadeloupe, 1,204
Port au Prince, Haiti, 534
Port of Spain, Trinidad, 1,310
Puerto Cabello, Venezuela, 1,015
Rio de Janeiro, Brazil, 4,490
San Juan, Puerto Rico (via Windward Passage and north of Hispaniola), 903
San Juan, Puerto Rico (south of Hispaniola), 930
Santa Maria, Cuba, 149
Santiago de Cuba, Cuba, 334
Santo Domingo, Dominican Republic, 716
Tampico, Mexico, 1,009
Tuxpan, Mexico, 979
Veracruz, Mexico, 944
Willemstad, Curacao, 900

CIUDAD BOLIVAR, VENEZUELA (8°08'00" N., 63°33'00" W.)

Add 58 miles to San Felix distances.

CIUDAD TRUJILLO, DOMINICAN REPUBLIC. See Santo Domingo.

CIVITAVECCHIA, ITALY (42°05'36" N., 11°47'15" E.) to:

Junction Points*

Port Said, U.A.R., 1,243
Strait of Gibraltar, 907

Ports

Ajaccio, Corsica, 180
Alicante, Spain, 616
Bonifacio, Corsica, 131
Brindisi, Italy, 568
Cagliari, Sardinia, 239
Genova, Italy, 191
Haifa, Israel, 1,321
Istanbul, Turkey (via Corinth Canal), 1,066
Istanbul, Turkey (south of Greece), 1,107
Livorno, Italy, 120
Marseille, France, 316
Mentone, France, 180
Messina, Sicily, 308
Napoli, Italy, 152
Odessa, U.S.S.R. (via Corinth Canal), 1,414
Odessa, U.S.S.R. (south of Greece), 1,456
Oran, Algeria, 703
Palermo, Sicily, 253
Patrai, Greece, 612
Pozzuoli, Italy, 147
Salerno, Italy, 204
Sfax, Tunisia, 520
Siracusa, Sicily, 373
Valletta, Malta, 421
Viareggio, Italy, 480

CLARENCE BAY, ASCENSION ISLAND

(7°55'00" S., 14°25'00" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,409

Ports

Boma, Republic of the Congo, 1,608
Colon, Panama, 4,181
Freetown, Sierra Leone, 996
Lagos, Nigeria, 1,375
Luanda, Angola, 1,657
Montevideo, Uruguay, 2,824
New York, New York, U.S.A., 4,395
Philadelphia, Pennsylvania, U.S.A., 4,469
Recife, Brazil, 1,226
Rio de Janeiro, Brazil, 1,900
St. Helena Island, 707
Santa Isabel, Fernando Poo, 1,561

COATZACOALCOS, MEXICO. See Puerto Mexico.

*JUNCTION POINT.—See Preface for use of junction points.

COBH, IRELAND

(51°50'50" N., 8°18'00" W.) to:

Junction Points*

Bishop Rock, England, 143
Cape of Good Hope, Republic of South Africa, 5,892
Fastnet, Ireland, 64
Pentland Firth, Scotland, 578

Ports

Barrow in Furness, England, 252

Belfast, Ireland, 264

Cape Town, Republic of South Africa, 5,894

Cardiff, Wales, 204

Cherbourg, France, 315

Dublin, Ireland, 176

Falmouth, England, 182

Fishguard, Wales, 131

Glasgow, Scotland, 346

Holyhead, Wales, 182

Limerick, Ireland, 221

Liverpool, England, 246

Londonderry, Ireland, 340

COCANADA, INDIA

(17°00'00" N., 82°20'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,023

Lombok Strait, Indonesia, 2,567

Singapore, 1,593

Ports

Belawan, Indonesia, 1,261

Calcutta, India, 522

Fremantle, Australia, 3,515

Madras, India, 276

Malacca, Malaysia, 1,478

Penang, Malaysia, 1,273

Sabang, Indonesia, 1,019

COCHIN, INDIA

(9°58'00" N., 76°15'20" E.) to:

Junction Points*

Port Said, U.A.R., 3,237

Singapore, 1,853

Ports

Bombay, India, 592

Colombo, Ceylon, 318

Karachi, Pakistan, 1,044

COCKBURN TOWN, BAHAMAS

(24°03'00" N., 74°32'18" W.) to:

Junction Points*

Panama, Panama, 1,017

Straits of Florida, 615

Ports

New York, New York, U.S.A., 1,004

Nuevitas, Cuba, 265

San Juan, Puerto Rico, 611

COCKBURN TOWN, GRAND TURK ISLAND. See Grand Turk.

COLOMBO, CEYLON

(6°57'00" N., 79°51'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 3,203

Cape of Good Hope, Republic of South Africa (east of Madagascar, November–March), 4,363

Cape of Good Hope, Republic of South Africa (east of Madagascar, May–September), 4,402

Cape of Good Hope, Republic of South Africa (west of Madagascar, April–October), 4,447

Port Said, U.A.R. (south of Socotra, October–April), 3,481

Port Said, U.A.R. (north of Socotra, May–September), 3,600

Port Said, U.A.R. (south of Socotra, May–September), 3,608

Port Said, U.A.R. (south of Socotra, lower power, May–September), 3,668

Singapore, 1,581

Sunda Strait, Indonesia, 1,781

Torres Strait, Australia (south of Java and Timor), 3,978

Ports

Aden, Aden Protectorate (south of Socotra, October–April), 2,094

Aden, Aden Protectorate (south of Socotra, May–September), 2,221

Aden, Aden Protectorate (north of Socotra, May–September), 2,210

Aden, Aden Protectorate (south of Socotra, low power, May–September), 2,281

Akyab, Burma, 1,225

Al Basrah, Iraq, 2,359

Ao Phuket, Thailand, 1,192

Bassein, Burma, 1,194

Belawan, Indonesia, 1,240

Bhavnagar, India, 1,073

Bombay, India, 895

Calcutta, India, 1,258

Cochin, India, 318

Dar es Salaam, Tanganyika, 2,565

Darwin, Australia, 3,314

Diego Garcia, Chagos Archipelago, 974

Dumai, Indonesia, 1,496

Durban, Republic of South Africa (April and October), 3,677

Durban, Republic of South Africa (May–September), 3,703

Durban, Republic of South Africa (November–March), 3,664

Flying Fish Cove, Christmas Island, Indian Ocean, 1,888

Fremantle, Australia, 3,122

Johore Bahru, Malaya, 1,584

Karachi, Pakistan, 1,344

Madras, India, 611

Malacca, Malaysia, 1,458

Massaua, Ethiopia (south of Socotra, October–April), 2,481

Massaua, Ethiopia (north of Socotra, alternate, May–September), 2,600

Massaua, Ethiopia (south of Socotra, May to September), 2,608

Massaua, Ethiopia (south of Socotra, L.P., May–September), 2,669

Mombasa, Kenya (May–September), 2,555

Mombasa, Kenya (October–April), 2,519

Mormugao, India, 671

Negapatam, India, 476

Okha, India, 1,183

Penang, Malaysia, 1,285

Port Louis, Mauritius, 2,098

Port Refuge, Cocos Islands, 1,539

Rangoon, Burma, 1,268

Tamatave, Malagasy Republic, 2,351

Trincomalee, Ceylon, 347

Victoria, Seychelles, 1,652

Visakhapatnam, India, 880

COLON, PANAMA

(9°22'00" N., 79°55'00" W.) to:

Junction Points*

Bishop Rock, England (via Mona Passage), 4,344

Cape of Good Hope, Republic of South Africa, 6,488

Fastnet, Ireland (via Caicos Passage and track A), 4,247

Fastnet, Ireland (via Caicos Passage and track B), 4,244

Inishtrahull, Ireland (via Windward Passage), 4,362

Inishtrahull, Ireland (via Mona Passage), 4,393

Montreal, Canada (via Strait of Can-so), 3,126

Panama, Panama, 44

Pentland Firth, Scotland (via Windward Passage), 4,529

Pentland Firth, Scotland (via Mona Passage), 4,594

*JUNCTION POINT.—See Preface for use of junction points.

Punta Arenas, Chile (east of South America), 6,543
 Strait of Gibraltar (via Mona Passage), 4,308
 Yucatan Channel, 812

Ports

Alvaro Obregon, Mexico, 1,317
 Angmagssalik, Greenland (direct), 3,879
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,893
 Antilla, Cuba, 844
 Apalachicola, Florida, U.S.A., 1,287
 Argentia, Canada, 2,640
 Arkhangelsk, U.S.S.R., 5,820
 Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,901
 Barranquilla, Colombia, 336
 Belem, Brazil, 2,403
 Belize, British Honduras, 816
 Bluefields, Nicaragua, 276
 Bocas del Toro, Panama, 144
 Bordeaux, France (via Mona Passage), 4,593
 Bordeaux, France (via Windward Passage), 4,643
 Boston, Massachusetts, U.S.A. (via Nantucket Light Vessel, Crooked Island Passage, and Windward Passage), 2,157
 Brest, France, 4,420
 Bridgetown, Barbados, 1,237
 Brunswick, Georgia, U.S.A. (via Windward Passage), 1,538
 Buenos Aires, Argentina, 5,472
 Cadiz, Spain, 4,286
 Campeche, Mexico, 1,167
 Cap Haitien, Haiti, 817
 Cape Town, Republic of South Africa, 6,494
 Carmen, Mexico, 1,246
 Cartagena, Colombia, 281
 Castries, St. Lucia, 1,160
 Cayenne, French Guiana, 2,265
 Charleston, South Carolina, U.S.A. (via Windward Passage, and Crooked Island Passage), 1,564
 Charleston, South Carolina, U.S.A. (via Yucatan Channel), 1,636
 Charlotte Amalie, Virgin Islands, 1,029
 Charlottetown, Canada, 2,535
 Cienfuegos, Cuba, 772
 Clarence Bay, Ascension Island, 4,181
 Corpus Christi, Texas, U.S.A., 1,548
 Dakar, Senegal, 3,694
 El Ferrol del Caudillo, Spain, 4,222
 Elizabeth Harbor, Bahamas, 998
 Fort de France, Martinique, 1,159
 Freetown, Sierra Leone, 3,976
 Funchal, Madeira Island, 3,742

Georgetown, British Guiana, 1,515
 Great Harbor, Culebra Island, 1,018
 Guantanamo, Cuba, 689
 Gulfport, Mississippi, U.S.A., 1,388
 Halifax, Canada, 2,295
 Hamilton, Bermuda, 1,659
 Horta, Azores, 3,260
 Ivigtut, Greenland, 3,536
 Jacksonville, Florida, U.S.A., 1,516
 Jacmel, Haiti, 683
 Key West, Florida, U.S.A., 1,065
 Kingston, Jamaica, 551
 La Ceiba, Honduras, 666
 La Guaira, Venezuela, 841
 Lagos, Nigeria, 5,049
 Les Cayes, Haiti, 645
 Limon, Costa Rica, 190
 Lisboa, Portugal (via Mona Passage), 4,152
 Liverpool, Canada, 2,244
 Manzanillo, Cuba, 689
 Maracaibo, Venezuela, 693
 Miami, Florida, U.S.A., 1,214
 Mobile, Alabama, U.S.A., 1,393
 Montecristi, Dominican Republic, 838
 Montevideo, Uruguay, 5,349
 Nassau, Bahamas (via Windward Passage), 1,166
 New Orleans, Louisiana, U.S.A., 1,389
 New York, New York, U.S.A. (via Crooked Island Passage), 1,974
 Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,779
 Norfolk, Virginia, U.S.A. (via Yucatan Channel), 2,006
 Pensacola, Florida, U.S.A., 1,369
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage, and Crooked Island Passage), 1,946
 Pointe a Pitre, Guadeloupe, 1,168
 Ponta Delgada, Azores, 3,379
 Porlamar, Venezuela, 1,012
 Port Antonio, Jamaica, 582
 Port Arthur, Texas, U.S.A., 1,485
 Port of Spain, Trinidad, 1,159
 Portland, Maine, U.S.A., 2,198
 Portland Bight, Jamaica, 536
 Porto Grande, Cape Verde Islands, 3,240
 Portsmouth, New Hampshire, U.S.A. (via Windward Passage, Crooked Island Passage, and Nantucket Light Vessel), 2,174
 Progreso, Mexico, 1,026
 Puerto Barrios, Guatemala, 780
 Puerto Cabello, Venezuela, 802
 Puerto Cortes, Honduras, 733
 Puerto Mexico, Mexico, 1,396
 Recife, Brazil, 3,295
 Reykjavik, Iceland, 4,098
 Rio de Janeiro, Brazil, 4,367

St. Georges, Grenada, 1,118
 St. John, Canada, 2,294
 St. Johns, Antigua, 1,158
 St. John's, Canada, 2,695
 Salvador, Brazil, 3,698
 San Juan, Puerto Rico, 993
 Sanchez, Dominican Republic, 980
 Santa Cruz de Tenerife, Canary Islands, 3,776
 Santa Marta, Colombia, 365
 Santiago de Cuba, Cuba, 683
 Santo Domingo, Dominican Republic, 802
 Santos, Brazil, 4,566
 Savannah, Georgia, U.S.A. (via Yucatan Channel), 1,607
 Sint Nicolaas, Aruba, 633
 Sydney, Canada, 2,482
 Tampa, Florida, U.S.A., 1,216
 Tampico, Mexico, 1,485
 Tela, Honduras, 706
 Tuxpan, Mexico, 1,455
 Veracruz, Mexico, 1,420
 Vigo, Spain, 4,194
 Willemstad, Curacao, 698
 Wilmington, North Carolina, U.S.A. (via Windward Passage), 1,613
 Wilmington, North Carolina, U.S.A. (via Yucatan Channel), 1,730
 Yarmouth, Canada, 2,210

COLONIA, URUGUAY

(34°30'00" S., 57°52'15" W.)

Subtract 25 miles from Buenos Aires distances.

COMODORO RIVADAVIA, ARGENTINA

(45°51'35" S., 67°26'35" W.) to:

Junction Points*

Panama, Panama, 6,185
 Punta Arenas, Chile, 585

Ports

Buenos Aires, Argentina, 927
 Stanley, Falkland Islands, 531

COMPROLLER BAY, MARQUESAS.

See Baie du Controleur.

CONSTANTA, RUMANIA

(44°09'56" N., 28°40'14" E.) to:

Junction Points*

Port Said, U.A.R., 1,000
 Strait of Gibraltar (via Corinth Canal), 2,001
 Strait of Gibraltar (south of Greece), 2,018

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Cagliari, Sardinia (via Corinth Canal), 1,289
 Cagliari, Sardinia (south of Greece), 1,330
 Iskenderun, Turkey, 1,044
 Istanbul, Turkey, 201
 Jaffa, Israel, 1,057
 Kerch, U.S.S.R., 370
 Larnaca, Cyprus, 962
 Mersin, Turkey, 986
 Nice, France (via Corinth Canal), 1,476
 Nice, France (south of Greece), 1,518
 Novorossiysk, U.S.S.R., 403
 Odessa, U.S.S.R., 186
 Patrai, Greece (via Corinth Canal), 653
 Patrai, Greece (south of Greece), 811
 Pula, Yugoslavia (via Corinth Canal), 1,206
 Pula, Yugoslavia (south of Greece), 1,305
 Rostov-na-Donu, U.S.S.R., 572
 Sevastopol, U.S.S.R., 212

CONSTANTSA, RUMANIA. See Constanta.

CONSTANTINOPLE, TURKEY. See Istanbul.

COOK ISLANDS. See Avarua.

COPENHAGEN, DENMARK. See Kobenhavn.

COQUIMBO, CHILE
 (29°57'00" S., 71°21'00" W.) to:

Junction Points*
 Panama, Panama, 2,448
 Punta Arenas, Chile, 1,623

Ports
 Acapulco, Mexico, 3,259
 Antofagasta, Chile, 396
 Arica, Chile, 702
 Caldera, Chile, 196
 Callao, Peru, 1,136
 Corinto, Nicaragua, 2,711
 Corral, Chile, 627
 Esmeraldas, Ecuador, 2,014
 Guayaquil, Ecuador, 1,781
 Guaymas, Mexico, 4,153
 Iquique, Chile, 602
 Lota, Chile, 455
 Mollendo, Peru, 782

Monterey, California, U.S.A., 4,927
 Pisco, Peru, 1,036
 Puntarenas, Costa Rica, 2,526
 Salina Cruz, Mexico, 3,091
 San Blas, Mexico, 3,697
 San Diego, California, U.S.A., 4,605
 San Francisco, California, U.S.A., 5,007
 San Jose, Guatemala, 2,864
 Santa Barbara, California, U.S.A., 4,742
 Talcahuano, Chile, 428
 Valparaiso, Chile, 203

CORDOVA, ALASKA, U.S.A.
 (60°32'45" N., 145°46'30" W.) to:

Ports
 Ketchikan, Alaska, U.S.A., 656
 Kiska, Alaska, U.S.A., 1,435
 Nome, Alaska, U.S.A., 1,409
 Seattle, Washington, U.S.A., 1,216

CORFU, GREECE. See Kerkira.

CORINTO, NICARAGUA
 (12°28'15" N., 87°11'00" W.) to:

Junction Points*
 Panama, Panama, 683
 Punta Arenas, Chile, 4,180

Ports
 Acapulco, Mexico, 792
 Amapala, Honduras, 72
 Antofagasta, Chile, 2,400
 Arica, Chile, 2,181
 Brito, Nicaragua, 107
 Callao, Peru, 1,606
 Coquimbo, Chile, 2,711
 Corral, Chile, 3,236
 Esmeraldas, Ecuador, 823
 Guayaquil, Ecuador, 1,071
 Guaymas, Mexico, 1,738
 Iquique, Chile, 2,247
 La Libertad, El Salvador, 141
 La Libertad, Mexico, 1,902
 La Union, El Salvador, 73
 Los Angeles, California, U.S.A., 2,281
 Lota, Chile, 3,081
 Mollendo, Peru, 2,056
 Monterey, California, U.S.A., 2,533
 Pisco, Peru, 1,718
 Puerto Armuelles, Panama, 409
 Puntarenas, Costa Rica, 262
 Salina Cruz, Mexico, 525
 San Blas, Mexico, 1,282
 San Diego, California, U.S.A., 2,211
 San Francisco, California, U.S.A., 2,613

San Jose, Guatemala, 238
 Santa Barbara, California, U.S.A., 2,348
 Talcahuano, Chile, 3,062
 Valparaiso, Chile, 2,875

CORK, IRELAND
 (51°54'00" N., 8°27'30" W.)

Add 9 miles to Cobh distances.

CORPUS CHRISTI, TEXAS, U.S.A.
 (27°49'00" N., 97°24'00" W.) to:

Junction Points*
 Straits of Florida, 803
 Yucatan Channel, 764

Ports
 Colon, Panama, 1,548
 Habana, Cuba, 864
 Tampico, Mexico, 366

CORRAL, CHILE
 (39°53'00" S., 73°28'00" W.) to:

Junction Points*
 Panama, Panama, 2,983
 Punta Arenas, Chile, 1,020

Ports
 Antofagasta, Chile, 1,000
 Arica, Chile, 1,305
 Callao, Peru, 1,691
 Coquimbo, Chile, 627
 Corinto, Nicaragua, 3,236
 Guayaquil, Ecuador, 2,313
 Iquique, Chile, 1,205
 Lota, Chile, 195
 Mollendo, Peru, 1,378
 Monterey, California, U.S.A., 5,327
 Pisco, Peru, 1,596
 Salina Cruz, Mexico, 3,577
 San Diego, California, U.S.A., 5,007
 San Francisco, California, U.S.A., 5,407
 Santa Barbara, California, U.S.A., 5,144
 Talcahuano, Chile, 229
 Valparaiso, Chile, 442

CORUNA, SPAIN. See La Coruna.

COTONOU, DAHOMEY
 (6°21'00" N., 2°26'30" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 857
 Ushant, France, 3,747

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Douala, Cameroon, 486
Monrovia, Liberia, 893

COVENAS, COLOMBIA
(9°25'00" N., 75°41'10" W.) to:

Junction Points*
Panama, Panama, 308
Yucatan Channel, 924

Ports
Cienfuegos, Cuba, 814
Kingston, Jamaica, 528
Port of Spain, Trinidad, 968

CRISTOBAL, CANAL ZONE. See
Colon.

CROTONE, ITALY
(39°05'30" N., 17°08'00" E.) to:

Junction Points*
Port Said, U.A.R., 896
Strait of Gibraltar, 1,412

Ports
Durrës, Albania, 172
Messina, Sicily, 367
Taranto, Italy, 87

CUBI POINT, SUBIC BAY, PHILIP-
PINES
(14°48'00" N., 120°16'00" E.)

Subtract 1 mile from Olangapo dis-
tances.

CULEBRA ISLAND. See Great Har-
bor.

CUMANA. See Puerto Sucre.

CURACAO. See Willemstad.

CUXHAVEN, GERMANY
(53°52'00" N., 8°43'00" E.)

Subtract 56 miles from Hamburg dis-
tances.

DA NANG, VIETNAM
(16°06'30" N., 108°12'00" E.) to:

Ports
Cebu, Philippines, 1,049
Hong Kong, B.C.C., 520
Manila, Philippines, 758

Sai Gon, Vietnam, 518

DAIREN, CHINA. See Ta-lien.

DAKAR, SENEGAL
(14°41'00" N., 17°26'00" W.) to:

Junction Points*
Bishop Rock, England, 2,195
Cape of Good Hope, Republic of South
Africa, 3,610
Inishtrahull, Ireland, 2,546
Montreal, Canada, 3,566
Panama, Panama, 3,738
Pentland Firth, Scotland, 2,794
Punta Arenas, Chile, 4,928
Strait of Gibraltar, 1,487
Straits of Florida (via Northwest
Providence Channel), 3,768
Ushant, France, 2,152

Ports
Abidjan, Ivory Coast, 1,166
Agadir, Morocco, 1,109
Belem, Brazil, 2,104
Bolama, Portuguese Guinea, 272
Bordeaux, France, 2,243
Boston, Massachusetts, U.S.A., 3,221
Buenos Aires, Argentina, 3,864
Cadiz, Spain, 1,500
Cap Haitien, Haiti, 3,154
Cape Town, Republic of South Africa,
3,593
Casablanca, Morocco, 1,333
Castries, St. Lucia, 2,543
Cayenne, French Guiana, 2,140
Charleston, South Carolina, U.S.A.,
3,557
Charlotte Amalie, Virgin Islands, 2,751
Colon, Panama, 3,694
El Ferrol del Caudillo, Spain, 1,843
El Jadida, Morocco, 1,317
Fedala, Morocco, 1,338
Freetown, Sierra Leone, 496
Funchal, Madeira Island, 1,091
Galway, Ireland, 2,383
Greenville, Liberia, 831
Guantanamo, Cuba, 3,312
Halifax, Canada, 2,956
Horta, Azores, 1,559
Huelva, Spain, 1,521
Jacksonville, Florida, U.S.A., 3,650
Kenitra, Morocco, 1,432
Key West, Florida, U.S.A., 3,709
Kingston, Jamaica, 3,436
La Guaira, Venezuela, 2,911
Larache, Morocco, 1,425
Libreville, Gabon, 1,982
Lisboa, Portugal, 1,544
Marshall, Liberia, 724

Monrovia, Liberia, 693
Natal, Brazil, 1,620
New York, New York, U.S.A., 3,335
Norfolk, Virginia, U.S.A., 3,408
Paramaribo, Surinam, 2,315
Philadelphia, Pennsylvania, U.S.A.,
3,441
Ponta Delgada, Azores, 1,459
Port Buchanan, Liberia, 755
Port Etienne, Mauritania, 394
Port of Spain, Trinidad, 2,628
Porto, Portugal, 1,682
Portsmouth, New Hampshire, U.S.A.,
3,219
Puerto Cortes, Honduras, 4,077
Rabat, Morocco, 1,412
Recife, Brazil, 1,717
Rio de Janeiro, Brazil, 2,763
River Cess, Liberia, 790
Safi, Morocco, 1,228
St. John's, Canada, 2,646
San Juan, Puerto Rico, 2,812
Santa Cruz de Tenerife, Canary Is-
lands, 846
Santo Domingo, Dominican Republic,
3,036
Sassandra, Ivory Coast, 1,080
Sulima, Sierra Leone, 589
Tabu, Ivory Coast, 947
Tangier, Morocco, 1,483
Vigo, Spain, 1,744
Villa Cisneros, Spanish Sahara, 578

DANZIG, POLAND. See Gdansk.

DAR ES SALAAM, TANGANYIKA
(6°49'30" S., 39°17'30" E.) to:

Junction Points*
Cape of Good Hope, Republic of South
Africa, 2,330
Port Said, U.A.R., 3,238
Singapore, 4,042

Ports
Aden, Aden Protectorate, 1,751
Belawan, Indonesia, 3,709
Colombo, Ceylon, 2,565
Darwin, Australia, 5,428
Fremantle, Australia, 4,513
Lindi, Tanganyika, 218
Malacca, Malaysia, 3,927
Mocambique, Mozambique, 533
Mtwara, Tanganyika, 230
Penang, Malaysia, 3,754
Sabang, Indonesia, 3,443

*JUNCTION POINT.—See Preface for use of junction points.

DARNAH, LIBYA

(32°46'00" N., 22°40'00" E.) to:

Junction Points*

Port Said, U.A.R., 514
 Strait of Gibraltar, 1,450

Ports

Izmir, Turkey, 465
 Piraievs, Greece, 316
 Valletta, Malta, 450

DARTMOUTH, ENGLAND

(50°21'00" N., 3°34'20" W.) to:

Junction Points*

Bishop Rock, England, 122
 Ushant, France, 135

Ports

Le Havre, France, 151
 London, England, 292
 Southampton, England, 100

DARWIN, AUSTRALIA

(12°28'30" S., 130°50'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,978
 Cape of Good Hope, Republic of South Africa, 6,100
 Lombok Strait, Indonesia (south of Pulau Roti), 926
 Port Said, U.A.R. (via Eight Degree Channel, October–April), 6,743
 Port Said, U.A.R. (via One and Half Degree Channel, May–September), 6,846
 Sunda Strait, Indonesia (via south of Java), 1,623
 Torres Strait, Australia (via Clarence Strait and Dundas Strait), 735
 Wetar Passage, Indonesia (via west of Bathurst Island), 326

Ports

Aden, Aden Protectorate (via Eight Degree Channel, October–April), 5,356
 Aden, Aden Protectorate (via One and Half Degree Channel, May–September), 5,459
 Al Bahrayn, Bahrain, 5,390
 Al Basrah, Iraq, 5,650
 Al Kuwayt, Kuwait, 5,597
 Albany, Australia, 2,152
 Aleksandrovsk, Sakhalin, 4,041
 Ambon, Indonesia, 579
 Antisirana, Malagasy Republic (north of Scott Reef), 4,769

Apra, Guam (via Selat Sele), 1,925
 Beira, Mozambique, 5,553
 Berbera, Somali Republic (south of Socotra, via Eight Degree Channel, and south of Java), 5,384
 Bombay, India, 4,193
 Bunbury, Australia, 1,906
 Bushehr, Iran, 5,446
 Calicut, India, 3,683
 Ching-tao, China, 3,062
 Colombo, Ceylon, 3,320
 Dar es Salaam, Tanganyika, 5,428
 Diego Garcia, Chagos Archipelago, 3,483
 Djakarta, Indonesia, 1,706
 Durban, Republic of South Africa, 5,561
 Dutch Harbor, Alaska, U.S.A., 5,332
 East London, Republic of South Africa, 5,673
 El Ferrol del Caudillo, Spain, 1,843
 Fort Dauphin, Malagasy Republic, 4,775
 Fremantle, Australia, 1,847
 Geraldton, Australia, 1,638
 Hai-kou, China, 2,437
 Hakodate, Japan (via Selat Sele), 3,422
 Hong Kong, B.C.C., 2,363
 Hsia-men, China, 2,411
 Inchon, Korea (via Molucca Passage), 3,072
 Karachi, Pakistan, 4,653
 Kobe, Japan (via Selat Sele), 2,901
 Kodiak, Alaska, U.S.A., 5,859
 Kuang-chou, China, 2,438
 Lourenco Marques, Mozambique, 5,539
 Madras, India, 3,483
 Majunga, Malagasy Republic, 5,069
 Manila, Philippines, 1,834
 Masqat, Mascot and Oman, 4,873
 Massaua, Ethiopia (via Eight Degree Channel, October–April), 5,743
 Massaua, Ethiopia (via One and Half Degree Channel, May–September), 5,846
 Midway Island, 4,188
 Mocambique, Mozambique, 5,304
 Mokpo, Korea, 2,916
 Mombasa, Kenya, 5,434
 Mosselbaai, Republic of South Africa, 5,929
 Nagasaki, Japan (via Selat Sele), 2,785
 Omura, Bonin Islands (via Selat Sele), 2,549
 Port Elizabeth, Republic of South Africa, 5,767
 Port Louis, Mauritius (south of Scott Reef), 4,246
 Port Louis, Mauritius (north of Scott Reef), 4,252
 Pusan, Korea, 2,937

St. Denis, Reunion Island, 4,343
 San Diego, California, U.S.A., 7,297
 San Francisco, California, U.S.A., 6,984
 Seattle, Washington, U.S.A., 6,892
 Shang-hai, China, 2,804
 Shimonoseki, Japan (via Selat Sele), 2,883
 Sitka, Alaska, U.S.A., 6,338
 Ta-ku, China, 3,363
 Ta-lien, China, 3,204
 Tamatave, Malagasy Republic, 4,702
 Tanga, Tanganyika, 5,466
 Teluk Kau, Halmahera, 995
 Tjilatjap, Indonesia, 1,321
 Truk, Caroline Islands (via Selat Sele), 2,142
 Victoria, Seychelles, 4,494
 Vinh Cam Ranh, Vietnam, 2,169
 Vladivostok, U.S.S.R. (via Higashi Suido), 3,426
 Vladivostok, U.S.S.R. (via Selat Sele), 3,445
 Wake Island, 3,187
 Wonsan, Korea, 3,242
 Wyndham, Australia, 274
 Yampi Sound, Australia, 1,457
 Yin-hsien, China (via Shih-peng Chiang), 2,672
 Yokohama, Japan (via Selat Sele), 2,989
 Zamboanga, Philippines, 1,303
 Zanzibar, Zanzibar, 5,452

DAVAO, PHILIPPINES

(7°04'38" N., 125°37'38" E.) to:

Junction Points*

Singapore, 1,532
 Torres Strait, Australia, 1,628

Ports

Hong Kong, B.C.C., 1,382
 Cebu, Philippines, 439
 Makasar, Celebes, 929
 Manila, Philippines, 831
 Sorong, New Guinea, 601

DE-KASTRI, U.S.S.R.

(51°28'00" N., 140°47'00" E.) to:

Ports

Hakodate, Japan, 664
 Maizuru, Japan, 1,006
 Moskalvo, U.S.S.R., 200
 Otaru, Japan, 505
 Vladivostok, U.S.S.R., 737
 Yokohama, Japan, 1,176

*JUNCTION POINT.—See Preface for use of junction points.

DEEPWATER POINT, NEW JERSEY,
U.S.A.
(39°41'36'' N., 75°30'42'' W.)

Subtract 27 miles from Philadelphia
distances.

DELFZIJL, NETHERLANDS
(53°20'30'' N., 6°56'15'' E.)

Subtract 10 miles from Emden, Ger-
many distances.

DEMERARA, BRITISH GUIANA.
See Georgetown.

DEN HELDER, NETHERLANDS
(52°58'00'' N., 4°45'22'' E.) to:

Junction Points*
Bishop Rock, England, 509
Kiel Canal (east end), Germany, 263
Pentland Firth, Scotland, 447

Ports
Hamburg, Germany, 249
Rotterdam, Netherlands, 97

DERINCE, TURKEY
(40°44'35'' N., 29°49'30'' E.) to:

Junction Points*
Port Said, U.A.R., 837
Strait of Gibraltar (via Corinth
Canal), 1,838
Strait of Gibraltar (south of Greece),
1,855

Ports
Banghazi, Libya, 750
Genova, Italy (via Corinth Canal),
1,283
Genova, Italy (south of Greece),
1,325
Malaga, Spain (via Corinth Canal),
1,768
Malaga, Spain (south of Greece),
1,785
Patrai, Greece (via Corinth Canal),
489
Patrai, Greece (south of Greece), 648
Rostov-na-Donu, U.S.S.R., 685
Sfax, Tunisia, 1,081
Thessaloniki, Greece, 372

DERNA, LIBYA. See Darnah.

DESEADO, ARGENTINA. See
Puerto Deseado.

DEVONPORT, ENGLAND
(50°22'00'' N., 4°11'00'' W.)

Add 2 miles to Plymouth distances.

DI-KASTRI, U.S.S.R. See De-
Kastri.

DIEGO GARCIA, CHAGOS ARCHI-
PELAGO
(7°18'40'' S., 72°28'00'' E.) to:

Junction Points*
Singapore (via Udjung Masam
Muka), 2,224

Ports
Aden, Aden Protectorate, 2,116
Belawan, Indonesia, 1,860
Colombo, Ceylon, 974
Darwin, Australia, 3,483
Fremantle, Australia, 2,850
Hobart, Tasmania (via D'Entrecas-
teaux Channel), 4,501
Malacca, Malaysia, 2,078
Penang, Malaysia, 1,905
Sabang, Indonesia, 1,594
Victoria, Seychelles, 1,032

DIEGO SUAREZ BAY, MALAGASY
REPUBLIC. See Antsirana.

DIEPPE, FRANCE
(49°56'58'' N., 1°05'00'' E.) to:

Junction Points*
Bishop Rock, England, 297
Ushant, France, 270

Ports
Cherbourg, France, 105
Plymouth, England, 206

DIKILI, TURKEY
(39°04'30'' N., 26°53'00'' E.) to:

Junction Points*
Port Said, U.A.R., 596
Strait of Gibraltar, 1,532

Ports
Istanbul, Turkey, 285
Izmir, Turkey, 63
Thessaloniki, Greece, 236

DIKSON HARBOR, U.S.S.R.
(73°30'00'' N., 80°28'00'' E.) to:

Ports
Arkhangelsk, U.S.S.R., 1,105

Berlevag, Norway, 1,069
Hull, England, 2,552
Iokanga, U.S.S.R., 899
Longyearbyen, Svalbard, 1,148
Murmansk, U.S.S.R., 1,025
Mys Chelyuskin, U.S.S.R., 457
Sondre Honningsvåg, Norway, 1,133

DJAKARTA, INDONESIA
(6°06'00'' S., 106°53'00'' E.) to:

Junction Points*
Lombok Strait, Indonesia, 615
Port Said, U.A.R., 5,293
Singapore (via Selat Durian), 525
Singapore (via Selat Riouw, and Selat
Bangka), 526
Sunda Strait, Indonesia, 77
Torrest Strait, Australia, 2,152
Wetar Passage, Indonesia, 1,247

Ports
Aleksandrovisk, Sakhalin, 3,942
Apra, Guam (via Makassar Strait),
2,639
Belawan, Indonesia, 864
Cebu, Philippines (via Lumbukan
Channel), 1,563
Chinnampo, Korea, 2,955
Darwin, Australia, 1,706
Hakodate, Japan, 3,468
Hong Kong, B.C.C., 1,782
Hsia-men, China, 1,971
Iloilo, Philippines (via Lumbukan
Channel, and Selat Gaspar), 1,476
Inchon, Korea, 2,865
Jesselton, North Borneo, 999
Kobe, Japan (via Balintang Channel),
2,987
Kuang-chou, China, 1,842
Kuching, Sarawak, 627
Lu-shun, China, 2,935
Malacca, Malaysia, 613
Manila, Philippines (via Palawan
Passage), 1,559
Mokpo, Korea, 2,741
Nagasaki, Japan, 2,712
Palembang, Indonesia, 358
Petropavlovsk, U.S.S.R. (east of Japan
and Balintang Channel), 4,530
Petropavlovsk, U.S.S.R. (via La Pe-
rouse Strait), 4,555
Portland, Oregon, U.S.A. (via Balin-
tang Channel), 7,415
Pusan, Korea, 2,836
Sai Gon, Vietnam, 1,025
San Diego, California, U.S.A., 7,985
San Francisco, California, U.S.A. (via
Makassar Strait), 7,641
San Francisco, California, U.S.A. (via
Balintang Channel), 7,642
Semarang, Indonesia, 236

*JUNCTION POINT.—See Preface for use of junction points.

Shang-hai, China, 2,522
 Shan-tou, China, 1,880
 Shimonoseki, Japan, 2,838
 Sorido, Indonesia, 1,879
 Sukarnopura, Indonesia, 2,187
 Ta-ku, China, 3,088
 Tan-shui, Taiwan, 2,094
 Tjirebon, Indonesia, 156
 Vinh Cam Ranh, Vietnam, 1,103
 Vladivostok, U.S.S.R., 3,338
 Wei-hai-wei, China, 2,860
 Wonsan, Korea, 3,142
 Yen-tai, China, 2,894
 Yokohama, Japan, 3,194

DJIBOUTI, FRENCH SOMALILAND
 (11°36'30" N., 43°08'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 4,063
 Port Said, U.A.R., 1,374
 Singapore (north of Socotra and Strait of Malacca), 3,769

Ports
 Aden, Aden Protectorate, 133
 Antsirana, Malagasy Republic, 1,969

DONGES, FRANCE
 (47°18'18" N., 2°04'30" W.)

Add 6 miles to St. Nazaire distances.

DORDRECHT, NETHERLANDS
 (51°48'45" N., 4°39'15" E.)

Add 9 miles to Rotterdam distances.

DOUALA, CAMEROON
 (4°03'00" N., 9°41'00" E.) to:

Junction Points*
 Straits of Florida, 5,526

Ports
 Anecho, Togo, 526
 Bata, Spanish Guinea, 141
 Boma, Republic of the Congo, 742
 Cabinda, Cabinda, 668
 Cotonou, Dahomey, 486
 Kribi, Cameroon, 87
 Lagos, Nigeria, 442
 Libreville, Gabon, 228
 Mayumba, Gabon, 513
 Pointe Noire, Gabon, 613
 Port Gentil, Gabon, 297
 Sao Tome, Sao Tome, 285

Sassandra, Ivory Coast, 930

DOUGLAS, ISLE OF MAN
 (54°09'00" N., 4°28'00" W.) to:

Junction Points*
 Bishop Rock, England, 276
 Fastnet, Ireland, 274
 Inishtrahull, Ireland, 156
 Pentland Firth, Scotland, 397

Ports
 Cardiff, Wales, 246
 Fishguard, Wales, 131
 Holyhead, Wales, 51
 Liverpool, England, 68

DOVER, ENGLAND
 (51°07'00" N., 1°20'00" E.) to:

Junction Points*
 Bishop Rock, England, 323
 Kiel Canal (east end), Germany, 410
 Skagens Odde, Denmark, 527
 Ushant, France, 306

Ports
 Amsterdam, Netherlands, 161
 Antwerpen, Belgium, 137
 Bergen, Norway, 590
 Bremerhaven, Germany, 341
 Caen, France, 140
 Cherbourg, France, 146
 Egersund, Norway, 477
 Emden, Germany, 284
 Esbjerg, Denmark, 370
 Granville, France, 181
 Hamburg, Germany, 399
 Kristiansand, Norway, 488
 Oslo, Norway, 640
 Plymouth, England, 229
 Portland, England, 155
 Portsmouth, England, 105
 Rotterdam, Netherlands, 138
 St. Malo, France, 228
 Southampton, England, 123
 Stavanger, Norway, 517
 Wilhelmshaven, Germany, 328

DUALA, CAMEROON. See Douala.

DUBLIN, IRELAND
 (53°20'45" N., 6°13'00" W.) to:

Junction Points*
 Bishop Rock, England, 232
 Fastnet, Ireland, 223
 Inishtrahull, Ireland, 184
 Pentland Firth, Scotland, 424

Ports
 Ardrossan, Scotland, 153
 Avonmouth, England, 220
 Barrow in Furness, England, 122
 Cardiff, Wales, 205
 Cobh, Ireland, 176
 Londonderry, Ireland, 189
 Newport, Wales, 219
 Port Talbot, Wales, 179
 Waterford, Ireland, 113

DUBROVNIK, YUGOSLAVIA
 (42°38'24" N., 18°06'55" E.) to:

Junction Points*
 Port Said, U.A.R. (via Corinth Canal), 1,025
 Port Said, U.A.R. (south of Greece), 1,038
 Strait of Gibraltar, 1,420

Ports
 Bari, Italy, 108
 Barletta, Italy, 113
 Bayrut, Lebanon (via Corinth Canal), 1,074
 Bayrut, Lebanon (south of Greece), 1,107
 Cartagena, Spain, 1,177
 Genova, Italy, 856
 Kerkira, Greece, 208
 Porto di Manfredonia, Italy, 117
 Rijeka, Yugoslavia, 276
 Sibenik, Yugoslavia, 144
 Venezia, Italy, 320

DUDINKA, U.S.S.R.
 (69°24'00" N., 86°10'00" E.)

Add 298 miles to Dikson Harbor distances.

DUMAI, INDONESIA
 (1°42'00" N., 101°28'00" E.) to:

Junction Points*
 Port Said, U.A.R., 4,943
 Singapore, 200

Ports
 Al Basrah, Iraq, 3,824
 Calcutta, India, 1,579
 Colombo, Ceylon, 1,496

DUNDEE, SCOTLAND
 (56°27'45" N., 2°56'40" W.) to:

Junction Points*
 Bishop Rock, England, 713
 Kiel Canal (east end), Germany, 501
 Pentland Firth, Scotland, 179

*JUNCTION POINT.—See Preface for use of junction points.

Skagens Odde, Denmark, 455
Ushant, France, 698

Ports

Amsterdam, Netherlands, 374
Antwerpen, Belgium, 442
Bremerhaven, Germany, 437
Dunkerque, France, 402
Emden, Germany, 400
Esbjerg, Denmark, 394
Hamburg, Germany, 485
Hull, England, 240
Le Havre, France, 505
London, England, 420
Oostende, Belgium, 398
Plymouth, England, 621
Portland, England, 547
Portsmouth, England, 497
Rotterdam, Netherlands, 383
Southampton, England, 515
Wilhelmshaven, Germany, 430
Zeebrugge, Belgium, 394

DUNEDIN, NEW ZEALAND

(45°53'00" S., 170°31'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 2,622
Torres Strait, Australia, 2,872

Ports

Hobart, Tasmania, 1,068
Melbourne, Australia, 1,309
Noumea, New Caledonia, 1,552

DUNKERQUE, FRANCE

(51°03'00" N., 2°22'00" E.) to:

Junction Points*

Bishop Rock, England, 355
Kiel Canal (east end), Germany, 386
Pentland Firth, Scotland, 525
Skagens Odde, Denmark, 511
Ushant, France, 351

Ports

Aberdeen, Scotland, 418
Amsterdam, Netherlands, 135
Antwerpen, Belgium, 102
Bergen, Norway, 585
Bremerhaven, Germany, 321
Cherbourg, France, 179
Dundee, Scotland, 402
Egersund, Norway, 469
Emden, Germany, 264
Esbjerg, Denmark, 350
Hamburg, Germany, 374
Hartlepool, England, 281
Hull, England, 223
Inverness, Scotland, 526
Kristiansand, Norway, 475

Le Harve, France, 144
Leith, Scotland, 399
London, England, 112
Newcastle, England, 307
Oslo, Norway, 617
Plymouth, England, 264
Portland, England, 190
Portsmouth, England, 150
Southampton, England, 168
Stavanger, Norway, 510
Wilhelmshaven, Germany, 308

DURADZZO, ALBANIA. See Durres.

DURBAN, REPUBLIC OF SOUTH AFRICA

(29°52'00" S., 31°02'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 764
Port Said, U.A.R., 4,567
Singapore, 4,872

Ports

Adelaide, Australia, 5,160
Albany, Australia, 4,275
Antsirana, Malagasy Republic, 1,561
Bombay, India, 3,829
Colombo, Ceylon (April–October, alternate, May–September), 3,704.
Colombo, Ceylon (November–March), 3,664
Colombo, Ceylon (May–September), 3,703
Darwin, Australia, 5,561
East London, Republic of South Africa, 258
Fremantle, Australia, 4,243
Karachi, Pakistan, 3,915
Lourenco Marques, Mozambique, 307
Malacca, Malaysia, 4,757
Mombasa, Kenya, 1,718
Padang, Indonesia, 4,307
Penang, Malaysia, 4,584
Port des Galets, Reunion Island, 1,418
Port Louis, Mauritius, 1,560
Sabang, Indonesia, 4,273
Zanzibar, Zanzibar, 1,607

DURRES, ALBANIA

(41°18'15" N., 19°27'15" E.) to:

Junction Points*

Port Said, U.A.R., 951
Strait of Gibraltar, 1,349

Ports

Crotone, Italy, 172

Gallipoli, Italy, 137
Monopoli, Italy, 100
Piraeus, Greece (via Corinth Canal), 339
Ploce, Yugoslavia, 214
Porto di Manfredonia, Italy, 161
Preveza, Greece, 181
Salamis, Greece, 343
Split, Yugoslavia, 216
Taranto, Italy, 183

DUTCH HARBOR, ALASKA, U.S.A.
(53°54'00" N., 166°30'00" W.) to:

Junction Points*

Panama, Panama, 5,246
Punta Arenas, Chile, 8,063
Singapore, 5,364

Ports

Anadyrskiy Liman, U.S.S.R., 824
Apra, Guam, 3,403
Auckland, New Zealand, 5,578
Brisbane, Australia, 5,369
Bukhta Broutona, Kuril Islands, 1,609
Callao, Peru, 5,988
Ching-tao, China, 3,385
Darwin, Australia, 5,332
Guayaquil, Ecuador, 5,552
Hai-kou, China (via Tsugaru Kaikyo and north of Taiwan), 4,276
Hai-kou, China (south of Honshu and Taiwan), 4,385
Hakodate, Japan, 2,228
Hobart, Tasmania, 6,365
Hong Kong, B.C.C., 4,026
Honolulu, Hawaii, U.S.A., 2,040
Hot Springs Bay, Alaska, U.S.A., 451
Hsia-men, China (via La Perouse Strait), 3,771
Hsia-men, China (via Tsugaru Kaikyo), 3,770
Juneau, Alaska, U.S.A., 1,136
Kasatka, Japan, 1,846
Kiska, Alaska, U.S.A., 596
Kobe, Japan, 2,833
Kuang-chou, China, 4,117
Los Angeles, California, U.S.A., 2,382
Manila, Philippines (north of Luzon), 4,233
Matsugahama, Japan, 1,917
Melbourne, Australia, 6,321
Midway Island, 1,651
Nagasaki, Japan (via Tsugaru Kaikyo), 3,011
Nagasaki, Japan (south of Kyushu), 3,181
Noumea, New Caledonia, 4,857
Omura, Bonin Islands, 2,858
Pago Pago, American Samoa, 4,132

*JUNCTION POINT.—See Preface for use of junction points.

Palmyra Island, 2,912
 Papeete, Society Islands, 4,400
 Petersburg, Alaska, U.S.A., 1,215
 Petropavlovsk, U.S.S.R., 1,249
 Prince Rupert, Canada, 1,274
 Sai Gon, Vietnam, 4,894
 Sand Bay, Alaska, U.S.A., 397
 San Diego, California, U.S.A., 2,465
 San Francisco, California, U.S.A., 2,051
 Sasebo, Japan (via Osumi Kaikyo), 3,207
 Seattle, Washington, U.S.A., 1,707
 Shang-hai, China (via La Perouse Strait), 3,375
 Shang-hai, China (via Tsugaru Kaikyo), 3,377
 Shelekhovo, Kuril Islands, 1,411
 Shimonoseki, Japan, 2,892
 Slavnoye, Kuril Islands, 1,792
 Surabaya, Indonesia, 5,555
 Suva, Fiji Islands, 4,493
 Sweeper Cove, Alaska, U.S.A., 407
 Sydney, Australia, 5,761
 Ta-ku, China, 3,594
 Ta-lien, China (via Tsugaru Kaikyo), 3,437
 Ta-lien, China (via La Perouse Strait), 3,435
 Tomari, Japan, 1,978
 Truk, Caroline Islands, 3,493
 Unalakleet, Alaska, U.S.A., 752
 Valparaiso, Chile, 7,140
 Vancouver, Canada, 1,724
 Vladivostok, U.S.S.R., 2,518
 Wake Island, 2,463
 Whittier, Alaska, U.S.A., 817
 Yin-hsien, China (via Shih-peng Chiang), 3,414
 Yokohama, Japan, 2,551

EAST LONDON, REPUBLIC OF SOUTH AFRICA (33°01'30" S., 27°54'30" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 508
 Port Said, U.A.R., 4,830
 Singapore, 5,082

Ports
 Belawan, Indonesia, 4,749
 Darwin, Australia, 5,673
 Durban, Republic of South Africa, 258
 Fremantle, Australia, 4,304
 Inhambane, Mozambique, 722
 Malacca, Malaysia, 4,967
 Penang, Malaysia, 4,967
 Port Elizabeth, Republic of South Africa, 131

Quelimane, Mozambique, 1,062

EASTER ISLAND. See Isla de Pascua.

EDINBURGH, SCOTLAND. See Leith.

EGEDESMINDE, GREENLAND
 (68°42'33" N., 52°53'12" W.) to:

Junction Points*
 Pentland Firth, Scotland, 1,925
 Strait of Gibraltar, 2,772

Ports
 Churchill, Canada, 1,485
 Reykjavik, Iceland, 1,371
 St. John's, Canada, 1,294

EGERSUND, NORWAY
 (58°27'00" N., 6°00'00" E.) to:

Junction Points*
 Bishop Rock, England (via English Channel), 797
 Pentland Firth, Scotland, 298
 Skagens Odde, Denmark, 165
 Ushant, France, 781

Ports
 Aberdeen, Scotland, 273
 Amsterdam, Netherlands, 380
 Antwerpen, Belgium, 484
 Bremerhaven, Germany, 312
 Calais, France, 475
 Cherbourg, France, 621
 Dover, England, 477
 Dunkerque, France, 469
 Emden, Germany, 327
 Esbjerg, Denmark, 226
 Hamburg, Germany, 351
 Hull, England, 378
 Kristiansand, Norway, 86
 Le Havre, France, 589
 Leith, Scotland, 336
 London, England, 501
 Newcastle, England, 329
 Oostende, Belgium, 447
 Oslo, Norway, 238
 Plymouth, England, 706
 Portland, England, 632
 Portsmouth, England, 582
 Rotterdam, Netherlands, 412
 Southampton, England, 600
 Wilhelmshaven, Germany, 306
 Zeebrugge, Belgium, 440

EILAT, ISRAEL
 (29°32'42" N., 34°57'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,155
 Port Said, U.A.R., 381
 Singapore, 4,868

Ports
 Aden, Aden Protectorate, 1,247

ELAT, ISRAEL. See Eilat.

ELEVSIIS, GREECE
 (38°01'55" N., 23°32'00" E.)

Add 5½ miles to Piraeus distances.

EL FERROL, SPAIN. See El Ferrol del Caudillo.

EL FERROL DEL CAUDILLO, SPAIN
 (43°28'30" N., 8°15'00" W.) to:

Junction Points*
 Bishop Rock, England, 394
 Ushant, France, 343

Ports
 Aviles, Spain, 133
 Bayonne, France, 322
 Cape Town, Republic of South Africa, 5,421
 Colon, Panama, 4,222
 Dakar, Senegal, 1,843
 Horta, Azores, 970
 Lisboa, Portugal, 356
 Natal, Brazil, 3,312
 Ponta Delgada, Azores, 870
 Puerto de Pasajes, Spain, 300
 St. John's, Canada, 1,861
 San Sebastian, Spain, 302
 Viana do Castelo, Portugal, 155

EL JADIDA, MOROCCO
 (33°15'25" N., 8°30'00" W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 4,941
 Ushant, France, 998

Ports
 Dakar, Senegal, 1,317
 Tangier, Morocco, 207

*JUNCTION POINT.—See Preface for use of junction points.

**ELIZABETH HARBOR, GREAT EX-
UMA, BAHAMAS**
(23°30'30" N., 75°43'45" W.) to:

Junction Points*
Strait of Gibraltar, 3,651
Straits of Florida, 544

Ports
Castries, St. Lucia, 1,049
Charleston, South Carolina, U.S.A., 610
Charlotte Amalie, Virgin Islands, 704
Colon, Panama, 998
Georgetown, British Guiana, 1,484
Guantanamo, Cuba, 334
Hamilton, Bermuda, 813
Jacksonville, Florida, U.S.A., 559
Key West, Florida, U.S.A., 485
Kingston, Jamaica, 498
Miami, Florida, U.S.A., 354
New York, New York, U.S.A., 1,048
Norfolk, Virginia, U.S.A., 848
Philadelphia, Pennsylvania, U.S.A., 1,018
Port of Spain, Trinidad, 1,170
Portsmouth, New Hampshire, U.S.A., 1,252
St. Johns, Antigua, 900
San Juan, Puerto Rico, 642

EMDEN, GERMANY
(53°21'00" N., 7°12'00" E.) to:

Junction Points*
Bishop Rock, England, 606
Kiel Canal (east end), Germany, 197
Pentland Firth, Scotland, 484
Skagens Odde, Denmark, 344
Ushant, France, 590

Ports
Aberdeen, Scotland, 394
Antwerpen, Belgium, 276
Bergen, Norway, 457
Bremerhaven, Germany, 128
Cherbourg, France, 428
Dover, England, 284
Dundee, Scotland, 400
Dunkerque, France, 264
Egersund, Norway, 327
Esbjerg, Denmark, 172
Hamburg, Germany, 185
Hartlepool, England, 308
Harwich, England, 252
Hull, England, 279
Inverness, Scotland, 487
Kristiansand, Norway, 316
Le Havre, France, 396
Leith, Scotland, 403
London, England, 318

Newcastle, England, 329
Oostende, Belgium, 242
Oslo, Norway, 451
Plymouth, England, 513
Portland, England, 439
Portsmouth, England, 389
Rotterdam, Netherlands, 199
Southampton, England, 407
Stavanger, Norway, 376
Wilhelmshaven, Germany, 120
Zeebrugge, Belgium, 230

EMMAHAVEN, INDONESIA. See
Padang.

**ENDERBURY ISLAND, PHOENIX
ISLANDS**
(3°08'00" S., 171°06'00" W.) to:

Junction Points*
Panama, Panama, 5,599

Ports
Apia, Samoa, 641
Apra, Guam, 2,827
Christmas Island, North Pacific, 878
Seattle, Washington, U.S.A., 4,047

ENIWETOK, MARSHALL ISLANDS
(11°25'51" N., 162°21'30" E.) to:

Junction Points*
Panama, Panama, 7,086

Ports
Apra, Guam, 1,066
Honolulu, Hawaii, U.S.A., 2,375
Kwajalien, Marshall Islands, 359
Pearl Harbor, Hawaii, U.S.A., 2,347
San Francisco, California, U.S.A., 4,282

ENSENADA, MEXICO
(31°51'30" N., 116°38'00" W.) to:

Junction Points*
Panama, Panama, 2,791

Ports
Acapulco, Mexico, 1,369
Los Angeles, California, U.S.A., 151
Port Hueneme, California, U.S.A., 194

**ENSENADA HONDA, CULEBRA IS-
LAND.** See Great Harbor.

ERAKLEION, CRETE. See Iraklion.

EREGLI, TURKEY
(41°17'30" N., 31°26'00" E.)

Add 118½ miles to Istanbul distances
for ports outside the Black Sea.

ERMOUPOLIS, SIROS, GREECE
(37°26'00" N., 24°57'00" E.) to:

Junction Points*
Port Said, U.A.R., 535
Strait of Gibraltar (via Corinth
Canal), 1,524

Ports
Izmir, Turkey, 158
Piraeus, Greece, 84
Thessaloniki, Greece, 227

ERMOUPOLIS, SYRA, GREECE.
See Ermoupolis, Siros.

ESBJERG, DENMARK
(55°27'30" N., 8°26'30" E.) to:

Junction Points*
Bishop Rock, England, 688
Kiel Canal (east end), Germany, 372
Pentland Firth, Scotland, 443
Skagens Odde, Denmark, 234
Ushant, France, 676

Ports
Aberdeen, Scotland, 373
Amsterdam, Netherlands, 255
Antwerpen, Belgium, 362
Bergen, Norway, 361
Cherbourg, France, 514
Dover, England, 370
Dundee, Scotland, 394
Dunkerque, France, 350
Egersund, Norway, 226
Emden, Germany, 172
Hamburg, Germany, 172
Harwich, England, 338
Hartlepool, England, 336
Hull, England, 334
Inverness, Scotland, 455
Kristiansand, Norway, 206
Le Havre, France, 482
Leith, Scotland, 403
London, England, 403
Newcastle, England, 349
Oostende, Belgium, 328
Oslo, Norway, 341
Plymouth, England, 599
Portland, England, 525
Portsmouth, England, 475

*JUNCTION POINT.—See Preface for use of junction points.

Rotterdam, Netherlands, 287
 Southampton, England, 493
 Stavanger, Norway, 278
 Wilhelmshaven, Germany, 129
 Zeebrugge, Belgium, 318

ESMERALDAS, ECUADOR
 (1°02'00" N., 79°43'00" W.) to:

Junction Points*
 Panama, Panama, 474
 Punta Arenas, Chile, 3,486

Ports
 Acapulco, Mexico, 1,527
 Antofagasta, Chile, 1,703
 Arica, Chile, 1,484
 Callao, Peru, 909
 Coquimbo, Chile, 2,014
 Corinto, Nicaragua, 823
 Guayaquil, Ecuador, 356
 Guaymas, Mexico, 2,467
 Iquique, Chile, 1,550
 Lota, Chile, 2,388
 Mollendo, Peru, 1,359
 Monterey, California, U.S.A., 3,262
 Pisco, Peru, 1,021
 Puntarenas, Costa Rica, 614
 Salina Cruz, Mexico, 1,290
 San Blas, Mexico, 2,011
 San Diego, California, U.S.A., 2,940
 San Francisco, California, U.S.A., 3,342
 San Jose, Guatemala, 1,016
 Talcahuano, Chile, 2,368
 Valparaiso, Chile, 2,179

ESUTORU, U.S.S.R.
 (49°04'25" N., 142°01'50" E.) to:

Ports
 Akita, Japan, 596
 Hakodate, Japan, 536
 Moji, Japan, 1,100
 Muroran, Japan, 594
 Nagoya, Japan, 1,189
 Nakhodka, U.S.S.R., 561
 Ta-ku, China, 1,708

EXUMA HARBOR, GREAT EXUMA,
 BAHAMAS
 (23°34'00" N., 75°46'00" W.) to:

Junction Points*
 Panama, Panama, 1,039
 Straits of Florida, 637

Ports
 New York, New York, U.S.A., 1,053

Neuvas, Cuba, 287
 San Juan, Puerto Rico, 647

FAABORG, DENMARK. See Faborg.

FABORG, DENMARK
 (55°05'40" N., 10°14'22" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 53
 Skagens Odde, Denmark, 234

Ports
 Gdansk, Poland, 368
 Goteborg, Sweden, 222
 Lubeck, Germany, 102

FAERINGEHAVERN, GREENLAND
 (63°41'00" N., 51°34'00" W.) to:

Junction Points*
 Pentland Firth, Scotland, 1,597
 Strait of Gibraltar, 2,444

Ports
 Churchill, Canada, 1,326
 Reykjavik, Iceland, 1,043
 St. John's, Canada, 969

FAKARAVA, TUAMOTU ARCHI-
 PELAGO. See Rotoava.

FALMOUTH, ENGLAND
 (50°09'20" N., 5°03'30" W.) to:

Junction Points*
 Ushant, France, 100

Ports
 Cobh, Ireland, 182
 Hull, England, 464
 Liverpool, England, 313
 London, England, 351

FAMAGUSTA, CYPRUS
 (35°07'20" N., 33°56'40" E.) to:

Junction Points*
 Port Said, U.A.R., 257
 Strait of Gibraltar, 1,991

Ports
 Alexandria, U.A.R., 340
 Ashdod Yam, Israel, 203
 Banghazi, Libya, 768
 Marseille, France, 1,558
 Piraeus, Greece, 604

FANNING ISLAND, NORTH PA-
 CIFIC
 (3°51'30" N., 159°21'45" W.) to:

Junction Points*
 Panama, Panama, 4,805

Ports
 Auckland, New Zealand, 2,854
 Honolulu, Hawaii, U.S.A., 1,056
 Johnston Island, North Pacific, 1,032
 Wellington, New Zealand, 3,114

FAO, IRAQ. See Al Faw.

FARGE, GERMANY
 (53°12'00" N., 8°31'00" E.)

Add 23 miles to Bremerhaven dis-
 tances

FARSUND, NORWAY
 (58°05'40" N., 6°48'30" E.) to:

Junction Points*
 Pentland Firth, Scotland, 332
 Skagens Odde, Denmark, 132

Ports
 Bergen, Norway, 182
 London, England, 497
 Oslo, Norway, 198

FASLANE BAY, SCOTLAND
 (56°04'00" N., 4°49'00" W.)

Subtract 11 miles from Glasgow dis-
 tances.

FASTNET, IRELAND*
 (51°20'00" N., 9°36'00" W.) to:

Junction Points*
 Bishop Rock, England, 149
 Montreal, Canada (tracks C and D), 2,872
 Montreal, Canada (track E), 2,710
 Montreal, Canada (track F), 2,678
 Montreal, Canada (track G), 2,562
 Montreal, Canada (track G, via Strait of Belle Isle), 2,539
 Pentland Firth, Scotland (via west coast of Ireland), 578
 Pentland Firth, Scotland (via east coast of Ireland), 625
 Straits of Florida (track A), 3,773

*JUNCTION POINT.—See Preface for use of junction points.

Straits of Florida (track B), 3,761
 Straits of Florida (track C), 3,715
 Yucatan Channel (track A), 4,087
 Yucatan Channel (track B), 4,076
 Yucatan Channel (track C), 4,058

Ports

Ardrossan, Scotland, 348
 Argentina, Canada (track F), 1,819
 Avonmouth, England, 262
 Baltimore, Maryland, U.S.A. (track A), 3,193
 Baltimore, Maryland, U.S.A. (track B), 3,159
 Baltimore, Maryland, U.S.A. (track C), 3,098
 Barrow in Furness, England, 302
 Belem, Brazil, 3,741
 Belfast, Ireland, 311
 Boston, Massachusetts, U.S.A. (track A), 2,763
 Boston, Massachusetts, U.S.A. (track B), 2,715
 Boston, Massachusetts, U.S.A. (track C), 2,633
 Cairn Ryan, Scotland, 338
 Cardiff, Wales, 246
 Charleston, South Carolina, U.S.A. (track A), 3,316
 Charleston, South Carolina, U.S.A. (track B), 3,288
 Charleston, South Carolina, U.S.A. (track C), 3,239
 Charlotte Amalie, Virgin Islands, 3,279
 Cienfuegos, Cuba (track A), 3,950
 Cienfuegos, Cuba (track B), 3,992
 Cobh, Ireland, 64
 Colon, Panama (track A), 4,244
 Colon, Panama (track B), 4,243
 Douglas, Isle of Man, 274
 Dublin, Ireland, 223
 Fishguard, Wales, 180
 Fleetwood, England, 315
 Funchal, Madeira Island, 1,177
 Galway, Ireland, 166
 Glasgow, Scotland, 395
 Guantanamo, Cuba (track A), 3,585
 Guantanamo, Cuba (track B), 3,626
 Habana, Cuba (track A), 3,779
 Habana, Cuba (track B), 3,767
 Habana, Cuba (track C), 3,721
 Halifax, Canada (track A), 2,451
 Halifax, Canada (track B), 2,399
 Halifax, Canada (tracks C and D), 2,315
 Halifax, Canada (track E), 2,199
 Halifax, Canada (track F), 2,176
 Hamilton, Bermuda (track A), 2,663
 Hamilton, Bermuda (track B), 2,656
 Hamilton, Bermuda (track C), 2,655
 Holyhead, Wales, 232

Jacksonville, Florida, U.S.A. (track A), 3,487
 Jacksonville, Florida, U.S.A. (track B), 3,459
 Jacksonville, Florida, U.S.A. (track C), 3,407
 Key West, Florida, U.S.A. (track A), 3,713
 Key West, Florida, U.S.A. (track B), 3,701
 Key West, Florida, U.S.A. (track C), 3,685
 Kingston, Jamaica (track A), 3,748
 Kingston, Jamaica (track B), 3,748
 Limerick, Ireland, 157
 Liverpool, England, 295
 Londonderry, Ireland (via west coast of Ireland), 371
 Mathew Town, Great Inagua Island, 3,467
 Milford Haven, England, 178
 Miami, Florida, U.S.A. (track A), 3,582
 Miami, Florida, U.S.A. (track B), 3,570
 Miami, Florida, U.S.A. (track C), 3,554
 New London, Connecticut, U.S.A. (track A), 2,832
 New London, Connecticut, U.S.A. (track B), 2,795
 New London, Connecticut, U.S.A. (track C), 2,723
 New York, New York, U.S.A. (track A), 2,913
 New York, New York, U.S.A. (track B), 2,877
 New York, New York, U.S.A. (track C), 2,805
 Newport, Wales, 258
 Norfolk, Virginia, U.S.A. (track A), 3,072
 Norfolk, Virginia, U.S.A. (track B), 3,038
 Norfolk, Virginia, U.S.A. (track C), 2,977
 Paramaribo, Surinam, 3,554
 Philadelphia, Pennsylvania, U.S.A. (track A), 3,066
 Philadelphia, Pennsylvania, U.S.A. (track B), 3,029
 Philadelphia, Pennsylvania, U.S.A. (track C), 2,957
 Port au Prince, Haiti (track A), 3,620
 Port au Prince, Haiti (track B), 3,619
 Port Talbot, Wales, 218
 Providence, Rhode Island, U.S.A. (track A), 2,821
 Providence, Rhode Island, U.S.A. (track B), 2,784
 Providence, Rhode Island, U.S.A. (track C), 2,712

Rio de Janeiro, Brazil, 4,873
 San Juan, Puerto Rico (via Mona Passage), 3,299
 Santo Domingo, Dominican Republic, 3,491
 Swansea, Wales, 217
 Washington, D.C., U.S.A. (track A), 3,207
 Washington, D.C., U.S.A. (track B), 3,173
 Washington, D.C., U.S.A. (track C), 3,112
 Waterford, Ireland, 110
 Willemstad, Curacao, 3,708
 Wilmington, North Carolina, U.S.A. (track A), 3,262
 Wilmington, North Carolina, U.S.A. (track B), 3,234
 Wilmington, North Carolina, U.S.A. (track C), 3,183
 Workington, England, 310

FAYAL, AZORES. See Horta.

FECAMP, FRANCE

(49°46'00" N., 0°21'45" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 482
 Ushant, France, 246

Ports

Cherbourg, France, 79
 Plymouth, England, 183
 Rotterdam, Netherlands, 228

FEDALA, MOROCCO

(33°42'52" N., 7°23'52" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 4,951
 Ushant, France, 944

Ports

Dakar, Senegal, 1,338
 Tangier, Morocco, 158

FERNANDINA, FLORIDA, U.S.A.

(30°41'00" N., 81°27'40" W.) to:

Ports

Nassau, Bahamas, 450
 San Juan, Puerto Rico, 1,115

FERNANDO DE NORONHA

(3°50'00" S., 32°25'00" W.) to:

Ports

Kingston, St. Vincent, 1,320

*JUNCTION POINT.—See Preface for use of junction points.

<p>New York, New York, U.S.A., 3,517 Recife, Brazil, 300 Santos, Brazil, 2,405</p>	<p>FLEKKEFJORD, NORWAY (58°17'35'' N., 6°39'30'' E.) to:</p> <p>Junction Points* Pentland Firth, Scotland, 325 Skagens Odde, Denmark, 155</p> <p>Ports Bergen, Norway, 170 London, England, 479 Oslo, Norway, 219</p>	<p>FORT DAUPHIN, MALAGASY RE-PUBLIC (25°01'00'' S., 47°01'00'' E.) to:</p> <p>Junction Points* Cape of Good Hope, Republic of South Africa, 1,614 Port Said, U.A.R., 4,035 Singapore, 3,975</p> <p>Ports Belawan, Indonesia, 3,642 Darwin, Australia, 4,775 Fremantle, Australia, 3,593 Malacca, Malaysia, 3,860 Penang, Malaysia, 3,687 Port Louis, Mauritius, 654 Sabang, Indonesia, 3,376</p>
<p>FERNANDO PO. See Santa Isabel.</p>	<p>FLENSBURG, GERMANY (54°47'50'' N., 9°26'15'' E.) to:</p> <p>Junction Points* Kiel Canal (east end), Germany, 52 Skagens Odde, Denmark, 260</p> <p>Ports Gdynia, Poland, 358 Goteborg, Sweden, 272 Lubeck, Germany, 131</p>	<p>FORT DE FRANCE, MARTINIQUE (14°36'00'' N., 61°04'15'' W.) to:</p> <p>Junction Points* Panama, Panama, 1,202 Straits of Florida, 1,389</p> <p>Ports Baltimore, Maryland, U.S.A., 1,718 Bordeaux, France, 3,607 Boston, Massachusetts, U.S.A., 1,799 Bridgetown, Barbados, 130 Castries, St. Lucia, 37 Cayenne, French Guiana, 782 Cienfuegos, Cuba, 1,240 Colon, Panama, 1,159 Habana, Cuba (via Mona Passage and Old Bahama Channel), 1,350 Kingstown, St. Vincent, 89 New York, New York, U.S.A., 1,717 Norfolk, Virginia, U.S.A., 1,597 Nuevitas, Cuba, 1,035 Philadelphia, Pennsylvania, U.S.A. (via Anegada Channel), 1,724 Pointe a Pitre, Guadeloupe, 108 Ponce, Puerto Rico, 381 Roseau, Dominica Island, 50 San Juan, Puerto Rico, 385 Santiago de Cuba, Cuba, 951 Willemstad, Curacao, 495</p>
<p>FETHIYE, TURKEY (36°37'30'' N., 29°07'20'' E.) to:</p> <p>Junction Points* Port Said, U.A.R., 375 Strait of Gibraltar, 1,712</p> <p>Ports Ashdod Yam, Israel, 416 Banghazi, Libya, 548 Piraeus, Greece, 305</p>	<p>FLORIDA STRAITS. See Straits of Florida.</p>	<p>FORT-LIBERTE, HAITI (19°41'30'' N., 71°50'20'' W.) to:</p> <p>Junction Points* Panama, Panama, 881 Straits of Florida, 692</p> <p>Ports Grand Turk, Grand Turk Island, 122 New York, New York, U.S.A., 1,283 Nuevitas, Cuba, 339 San Juan, Puerto Rico, 373</p>
<p>FIJI ISLANDS. See Levuka or Suva.</p>	<p>FLUSHING, NETHERLANDS. See Vlissingen.</p>	
<p>FISHGUARD, WALES (52°00'30'' N., 4°58'30'' W.) to:</p> <p>Junction Points* Bishop Rock, England, 161 Fastnet, Ireland, 180 Pentland Firth, Scotland, 497</p> <p>Ports Avonmouth, England, 145 Barrow in Furness, England, 157 Belfast, Ireland, 182 Brest, France, 274 Cardiff, Wales, 130 Cherbourg, France, 306 Cobh, Ireland, 131 Douglas, Isle of Man, 131 Glasgow, Scotland, 247 London, England, 523 Southampton, England, 343 Swansea, Wales, 100</p>	<p>FLYING FISH COVE, CHRISTMAS ISLAND, INDIAN OCEAN (10°25'00'' S., 105°43'00'' E.) to:</p> <p>Junction Points* Cape Leeuwin, Australia, 1,540 Cape of Good Hope, Republic of South Africa, 4,923 Lombok Strait, Indonesia, 603 Sunda Strait, Indonesia, 281</p> <p>Ports Colombo, Ceylon, 1,888</p>	
<p>FIUME, YUGOSLAVIA. See Rijeka.</p>	<p>FOOCHOW, CHINA. See Fu-chou.</p>	
<p>FLEETWOOD, ENGLAND (53°55'00'' N., 3°00'00'' W.) to:</p> <p>Junction Points* Bishop Rock, England, 307 Fastnet, Ireland, 315 Inishtrahull, Ireland, 189 Pentland Firth, Scotland, 437</p> <p>Ports Southampton, England, 485</p>	<p>FORTALEZA, BRAZIL (3°42'00'' S., 38°31'00'' W.) to:</p> <p>Junction Points* Punta Arenas, Chile, 3,654</p> <p>Ports Belem, Brazil, 685 New York, New York, U.S.A., 3,304 Recife, Brazil, 425 Sao Luiz, Brazil, 392</p>	
	<p>FORT BAYARD, CHINA. See Chan-chiang.</p>	

*JUNCTION POINT.—See Preface for use of junction points.

FREDERICIA, DENMARK

(55°33'45" N., 9°45'35" E.) to:

Junction Points*Kiel Canal (east end), Germany, 85
Skagens Odde, Denmark, 169**Ports**Gdynia, Poland, 384
Goteborg, Sweden, 181
Lubeck, Germany, 155**FREDERIKSDAL, GREENLAND**

(60°00'00" N., 44°41'00" W.) to:

Junction Points*Pentland Firth, Scotland, 1,268
Strait of Gibraltar, 2,115**Ports**Churchill, Canada, 1,527
Reykjavik, Iceland, 714
St. John's, Canada, 800**FREDERIKSHAAB, GREENLAND**

(61°59'00" N., 49°43'00" W.) to:

Junction Points*Panama, Panama, 3,558
Montreal, Canada, 1,901**Ports**Baltimore, Maryland, U.S.A., 2,261
Halifax, Canada, 1,406
New York, New York, U.S.A., 1,959**FREDERIKSHAVN, DENMARK**

(57°26'00" N., 10°33'15" E.) to:

Junction Points*Kiel Canal (east end), Germany, 200
Skagens Odde, Denmark, 24**Ports**Arkhangelsk, U.S.S.R., 1,805
Gdynia, Poland, 395
Kobenhavn, Denmark, 142
Lubeck, Germany, 155**FREDERIKSTED, ST. CROIX**

(17°43'00" N., 64°53'20" W.) to:

Ports

Roseau, Dominica Island, 252

FREDRIKSTAD, NORWAY

(59°12'10" N., 10°57'00" E.) to:

Junction Points*

Pentland Firth, Scotland, 531

PortsBergen, Norway, 335
Oslo, Norway, 57**FREETOWN, SIERRA LEONE**

(83°30'00" N., 13°14'00" W.) to:

Junction Points*Bishop Rock, England, 2,673
Cape of Good Hope, Republic of South Africa, 3,190
Inishtrahull, Ireland, 3,024
Montreal, Canada, 4,019
Pentland Firth, Scotland, 3,272
Punta Arenas, Chile, 4,731
Strait of Gibraltar, 1,966
Straits of Florida, 4,137
Ushant, France, 2,630
Yucatan Channel, 4,229**Ports**Accra, Ghana, 955
Bathurst, Gambia, 450
Boston, Massachusetts, U.S.A., 3,656
Buenos Aires, Argentina, 3,712
Cadiz, Spain, 1,979
Cape Town, Republic of South Africa, 3,164
Casablanca, Morocco, 1,812
Clarence Bay, Ascension Island, 996
Colon, Panama, 3,976
Dakar, Senegal, 496
Funchal, Maderia Island, 1,573
Grand-Bassam, Ivory Coast, 737
Guantanamo, Cuba, 3,650
Huelva, Spain, 1,999
Key West, Florida, U.S.A., 4,076
Las Palmas de Gran Canaria, Canary Islands, 1,317
Lisboa, Portugal, 2,023
Marshall, Liberia, 293
Monrovia, Liberia, 264
Natal, Brazil, 1,569
New York, New York, U.S.A., 3,757
Norfolk, Virginia, U.S.A., 3,821
Philadelphia, Pennsylvania, U.S.A., 3,862
Pointe Noire, Gabon, 1,788
Ponta Delgada, Azores, 1,941
Port Harcourt, Nigeria, 1,397
Port of Spain, Trinidad, 2,896
Porto, Portugal, 2,161
Porto Grande, Cape Verde Islands, 871
Portsmouth, New Hampshire, U.S.A., 3,654
Recife, Brazil, 1,632
Rio de Janeiro, Brazil, 2,613
St. Helena Island, 1,564San Juan, Puerto Rico, 3,141
Santa Cruz de Tenerife, Canary Islands, 1,342
Sassandra, Ivory Coast, 582
Takoradi, Ghana, 859
Vigo, Spain, 2,223**FREMANTLE, AUSTRALIA**

(32°03'00" S., 115°44'20" E.) to:

Junction Points*Cape Leeuwin, Australia, 181
Cape of Good Hope, Republic of South Africa, 4,755
Lombok Strait, Indonesia, 1,440
Port Said, U.A.R., 6,310
Sunda Strait, Indonesia, 1,691
Torres Strait, Australia, 2,531**Ports**Aden, Aden Protectorate (north of Chagos Archipelago), 4,921
Al Bahrayn, Bahrain, 5,203
Al Basrah, Iraq, 5,440
Al Kuwayt, Kuwait, 5,387
Albany, Australia, 349
Antsirana, Malagasy Republic, 3,826
Beira, Mozambique, 4,351
Berbera, Somali Republic, 4,933
Bombay, India, 3,986
Burketown, Australia (via Clarence Strait), 2,697
Bushehr, Iran, 5,259
Calcutta, India (via west of Sumatra), 3,693
Calicut, India, 3,484
Cocanada, India, 3,515
Colombo, Ceylon, 3,122
Dar es Salaam, Tanganyika, 4,513
Darwin, Australia, 1,847
Diego Garcia, Chagos Archipelago, 2,850
Durban, Republic of South Africa, 4,244
East London, Republic of South Africa, 4,304
Fort Dauphin, Malagasy Republic, 3,593
Geraldton, Australia, 213
Karachi, Pakistan, 4,446
Lourenco Marques, Mozambique, 4,283
Madras, India, 3,393
Majunga, Malagasy Republic, 4,132
Masqat, Mascot and Oman, 4,686
Mocambique, Mozambique, 4,367
Mombasa, Kenya, 4,564
Mosselbaai, Republic of South Africa, 4,525
Port Louis, Mauritius (north of Mauritius), 3,202

*JUNCTION POINT.—See Preface for use of junction points.

Port Louis, Mauritius (south of Mauritius), 3,217
 Rangoon, Burma (west of Sumatra), 3,248
 Sabang, Indonesia, 2,601
 St. Denis, Reunion Island, 3,272
 Surabaya, Indonesia (via Bali Strait and north of Madura), 1,674
 Surabaya, Indonesia (via Bali Strait and south of Madura), 1,627
 Tamatave, Malagasy Republic, 3,650
 Tanga, Tanganyika, 4,583
 Tjilatjap, Indonesia, 1,519
 Victoria, Seychelles, 3,752
 Wyndham, Australia, 1,780
 Yampi Sound, Australia, 586
 Zanzibar, Zanzibar, 4,536

FRONTERA, MEXICO. See Alvaro Obregon.

FU-CHOU, CHINA
 (26°03'30" N., 119°19'00" E.)

Fu-chou is 9 miles above Lo-hsing-ta Mao-ti, on the River Min. See Lo-hsing-ta Mao-ti.

FUKUOKA, JAPAN. See Hagata.

FUNAFUTI, ELLICE ISLANDS
 (8°30'45" S., 179°12'15" E.) to:

Junction Points*
 Panama, Panama, 6,217

Ports
 Apia, Samoa, 632
 Apra, Guam, 2,455
 Brisbane, Australia, 1,895
 Hong Kong, B.C.C., 4,247
 Honolulu, Hawaii, U.S.A., 2,249
 Jaluit, Marshall Islands, 1,041
 Midway Island, 2,220
 Nonouti, Gilbert Islands, 544
 Noumea, New Caledonia, 1,132
 Papeete, Society Islands, 1,910
 San Francisco, California, U.S.A., 4,295
 Seattle, Washington, U.S.A., 4,640

FUNCHAL, MADEIRA ISLAND
 (32°38'00" N., 16°54'30" W.) to:

Junction Points*
 Bishop Rock, England, 1,136
 Cape of Good Hope, Republic of South Africa, 4,689

Fastnet, Ireland, 1,177
 Inishtrahull, Ireland, 1,466
 Montreal, Canada (tracks C and D), 2,850
 Montreal, Canada (track E), 2,815
 Montreal, Canada (track F), 2,815
 Pentland Firth, Scotland, 1,714
 Punta Arenas, Chile, 5,894
 Strait of Gibraltar, 589
 Straits of Florida, 3,503
 Ushant, France, 1,089

Ports
 Baltimore, Maryland, U.S.A., 3,028
 Bathurst, Gambia, 1,182
 Bordeaux, France, 1,192
 Boston, Massachusetts, U.S.A. (track A), 2,604
 Boston, Massachusetts, U.S.A. (track B), 2,601
 Brest, France, 1,110
 Buenos Aires, Argentina, 4,823
 Cadiz, Spain, 579
 Cape Town, Republic of South Africa, 4,680
 Casablanca, Morocco, 476
 Colon, Panama, 3,742
 Dakar, Senegal, 1,091
 Freetown, Sierra Leone, 1,573
 Guantanamo, Cuba, 3,194
 Horta, Azores, 677
 Huelva, Spain, 578
 Key West, Florida, U.S.A., 3,445
 Kingston, Jamaica, 3,349
 Las Palmas de Gran Canaria, Canary Islands, 282
 Lisboa, Portugal, 532
 New York, New York, U.S.A. (direct), 2,761

New York, New York, U.S.A. (track A), 2,764
 Norfolk, Virginia, U.S.A., 2,907
 Philadelphia, Pennsylvania, U.S.A. (direct), 2,901
 Philadelphia, Pennsylvania, U.S.A. (track A), 2,903
 Plymouth, England, 1,234
 Ponta Delgada, Azores, 550
 Port of Spain, Trinidad, 2,819
 Porto, Portugal, 650
 Porto Grande, Cape Verde Islands, 1,043
 Praia, Cape Verde Islands, 1,128
 Rio de Janeiro, Brazil, 3,722
 San Juan, Puerto Rico, 2,773
 Santa Cruz de Tenerife, Canary Islands, 258
 Tangier, Morocco, 588
 Vigo, Spain, 702

FUSAN, KOREA. See Pusan.

FUTAMI KO, BONIN ISLANDS.
 See Omura.

GABES, TUNISIA. See Qabis.

GAETA, ITALY
 (41°13'00" N., 13°35'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,150
 Strait of Gibraltar, 986

Ports
 Livorno, Italy, 228
 Messina, Sicily, 209
 Tunis, Tunisia, 315

GALAPAGOS ISLANDS. See Archipelago de Colon.

GALETS, PORT DES, REUNION ISLAND. See Port des Galets.

GALLE, CEYLON
 (6°01'45" N., 80°13'20" E.) to:

Junction Points*
 Singapore, 1,502

Ports
 Bombay, India, 944
 Calicut, India, 437
 Karachi, Pakistan, 1,393
 Trincomalee, Ceylon, 255

GALLE HARBOR, CEYLON. See Galle.

GALLIPOLI, ITALY
 (40°02'00" N., 17°59'00" E.) to:

Junction Points*
 Port Said, U.A.R., 908
 Strait of Gibraltar, 1,246

Ports
 Durres, Albania, 137
 Izmir, Turkey (south of Greece), 606
 Messina, Sicily, 201

GALVESTON, TEXAS, U.S.A.
 (29°19'00" N., 94°47'00" W.) to:

Junction Points*
 Panama, Panama, 1,536

*JUNCTION POINT.—See Preface for use of junction points.

Straits of Florida, 698
Yucatan Channel, 696

Ports

Alvaro Obregon, Mexico, 665
Barranquilla, Colombia, 1,577
Belize, British Honduras, 935
Bluefields, Nicaragua, 1,290
Campeche, Mexico, 617
Carmen, Mexico, 661
Cartagena, Colombia, 1,583
Cienfuegos, Cuba, 989
Habana, Cuba, 769
Limon, Costa Rica, 1,394
Maracaibo, Venezuela, 1,810
Puerto Barrios, Guatemala, 1,041
Puerto Cabello, Venezuela, 1,899
Puerto Cortes, Honduras, 1,001
Puerto Mexico, Mexico, 680
San Juan del Norte, Nicaragua (via inside route), 1,344
Santa Marta, Colombia, 1,588
Tampico, Mexico, 473
Tuxpan, Mexico, 530
Veracruz, Mexico, 623

GALWAY, IRELAND

(53°15'00'' N., 9°03'00'' W.) to:

Junction Points*

Fastnet, Ireland, 166
Inishtrahull, Ireland, 231
Strait of Gibraltar, 1,184

Ports

Dakar, Senegal, 2,383
Natal, Brazil, 3,786
St. John's, Canada, 1,678
Tromso, Norway, 1,352

GAVLE, SWEDEN

(60°41'28'' N., 17°13'50'' E.) to:

Junction Points*

Kiel Canal (east end), Germany, 615
Skagen Odde, Denmark, 676

Ports

Gdynia, Poland, 438
Helsinki, Finland, 292
Riga, Latvia, 355
Stockholm, Sweden, 153

GAIVEN DIKSON, U.S.S.R. See Dikson Harbor.

GDANSK, POLAND

(54°22'00'' N., 18°40'00'' E.) to:

Junction Points*

Kiel Canal (east end), Germany, 344
Skagens Odde, Denmark (via The Sound), 418
Skagens Odde, Denmark (via Store Baelt), 533

Ports

Assens, Denmark, 370
Faborg, Denmark, 368
Kobenhavn, Denmark, 468
Oslo, Norway (via The Sound), 540
Oslo, Norway (via Store Baelt), 657
Szczecin, Poland, 240

GDYNIA, POLAND

(54°32'00'' N., 18°33'00'' E.) to:

Junction Points*

Kiel Canal (east end), Germany, 339
Skagens Odde, Denmark, 528

Ports

Aalborg, Denmark (via The Sound), 389
Flensburg, Germany, 358
Fredericia, Denmark, 384
Frederikshavn, Denmark, 395
Gavle, Sweden, 438
Grena, Denmark, 361
Hamina, Finland, 512
Hango, Finland, 356
Helsinki, Finland, 415
Kobenhavn, Denmark, 464
Korsor, Denmark, 344
Kyndbyvaerkets, Denmark, 334
Lubeck, Germany, 328
Masnedssund, Denmark, 330
Middlefart, Denmark, 396
Musko Island, Sweden, 288
Naestved, Denmark, 383
Nakskov, Denmark, 335
Odense, Denmark, 438
Oxelosund, Sweden, 266
Peenemunde, Germany, 220
Pitea, Sweden, 687
Porkkala, Finland, 412
Randers, Denmark, 403
Ruch'i, U.S.S.R., 530
Sassnitz, Germany, 203
Sonderborg, Denmark, 360
Stralsund, Germany, 245
Sundsvall, Sweden, 507
Tallinn, Estonia, 392
Travemunde, Germany, 307
Umea, Sweden, 574
Ventspils, Latvia, 204

GEELONG, AUSTRALIA

(38°08'00'' S., 144°22'00'' E.)

Add 6 miles to Melbourne distances.

GELIBOLU, TURKEY

(40°24'18'' N., 26°40'00'' E.)

Subtract 113 miles from Istanbul distances for ports outside the Black Sea and Sea of Marmara.

GENOA, ITALY. See Genova.

GENOVA, ITALY

(44°23'52'' N., 8°55'20'' E.) to:

Junction Points*

Port Said, U.A.R., 1,426
Strait of Gibraltar, 868

Ports

Ajaccio, Corsica, 170
Alexandria, U.A.R., 1,316
Alger, Algeria, 531
Alicante, Spain, 564
Ancona, Italy, 1,017
Annaba, Algeria, 458
Banghazi, Libya, 912
Barcelona, Spain, 356
Bari, Italy, 810
Bastia, Corsica, 108
Bayrut, Lebanon, 1,508
Beaulieu, France, 316
Bizerte, Tunisia, 437
Bonifacio, Corsica, 199
Brindisi, Italy, 752
Cagliari, Sardinia, 359
Cannes, France, 107
Cartagena, Spain, 616
Catania, Sicily, 535
Ceuta, Morocco, 849
Civitavecchia, Italy, 191
Derince, Turkey (via Corinth Canal), 1,283
Derince, Turkey (south of Greece), 1,325
Dubrovnik, Yugoslavia, 856
Gibraltar, 850
Golfe-Juan, France, 101
Golfo di Oristano, Sardinia, 285
Haifa, Israel, 1,505
Hyeres, France, 147
Iraklion, Crete, 991
Istanbul, Turkey (via Corinth Canal), 1,250
Istanbul, Turkey (south of Greece), 1,291
Izmir, Turkey (via Corinth Canal), 1,095
Izmir, Turkey (south of Greece), 1,137
Malaga, Spain, 798
Marseille, France, 204
Messina, Sicily, 492
Napoli, Italy, 338
Nice, France, 89

*JUNCTION POINT.—See Preface for use of junction points.

Odessa, U.S.S.R. (via Corinth Canal)
1,598
Odessa, U.S.S.R. (south of Greece),
1,639
Olbia, Sardinia, 221
Oran, Algeria, 686
Palermo, Sicily, 431
Palma, Balearic Islands, 448
Piraeus, Greece (via Corinth Canal),
896
Piraeus, Greece (south of Greece),
978
Port St. Louis du Rhone, France, 221
Porto Vecchio di Piombino, Italy, 116
Rijeka, Yugoslavia, 1,085
St. Raphael, France, 118
Sete, France, 266
Sibenik, Yugoslavia, 958
Siracusa, Sicily, 557
Split, Yugoslavia, 943
Tarabulus, Libya, 719
Taranto, Italy, 705
Thessaloniki, Greece (via Corinth
Canal), 1,144
Thessaloniki, Greece (south of
Greece), 1,186
Toulon, France, 171
Trieste, Free Territory, 1,118
Tubruq, Libya, 1,048
Tunis, Tunisia, 472
Valencia, Spain, 512
Valletta, Malta, 584
Venezia, Italy, 1,128
Villefranche, France, 88
Volos, Greece (via Corinth Canal),
1,085
Volos, Greece (south of Greece), 1,127

GENSAN, KOREA. See Wonsan.

GENT, BELGIUM. See Ghent.

GEORGE TOWN, GREAT EXUMA,
BAHAMAS. See Elizabeth Harbor.

GEORGETOWN, GRAND CAYMAN
(19°18'00" N., 81°23'00" W.) to:

Junction Points*
Yucatan Channel, 257

GEORGETOWN, BRITISH GUIANA
(6°49'00" N., 58°10'00" W.) to:

Junction Points*
Bishop Rock, England, 3,643
Cape of Good Hope, Republic of South
Africa, 5,026

Inishtrahull, Ireland, 3,779
Montreal, Canada, 3,077
Panama, Panama, 1,558
Pentland Firth, Scotland, 4,001
Punta Arenas, Chile (east of South
America), 5,030
Strait of Gibraltar, 3,358
Straits of Florida (via Mona Passage),
1,869
Yucatan Channel, 1,846

Ports
Baltimore, Maryland, U.S.A., 2,211
Belem, Brazil, 896
Boston, Massachusetts, U.S.A., 2,282
Bridgetown, Barbados, 389
Buenos Aires, Argentina, 3,954
Castries, St. Lucia, 482
Charlotte Amalie, Virgin Islands, 814
Colon, Panama, 1,515
Elizabeth Harbor, Bahamas, 1,484
Guantanamo, Cuba, 1,316
Habana, Cuba, 1,830
Hamilton, Bermuda, 1,591
Horta, Azores, 2,488
Jacksonville, Florida, U.S.A., 1,980
Key West, Florida, U.S.A., 1,818
Kingston, Jamaica, 1,334
Limon, Costa Rica, 1,647
Lisboa, Portugal, 3,264
Miami, Florida, U.S.A., 1,788
Montevideo, Uruguay, 3,840
Natal, Brazil, 1,630
New York, New York, U.S.A., 2,217
Norfolk, Virginia, U.S.A., 2,090
Paramaribo, Surinam, 215
Philadelphia, Pennsylvania, U.S.A.,
2,223
Pointe a Pitre, Guadeloupe, 606
Port of Spain, Trinidad, 376
Portsmouth, New Hampshire, U.S.A.,
2,284

Puerto Cortes, Honduras, 1,933
Recife, Brazil, 1,781
Rio de Janeiro, Brazil, 2,853
St. Johns, Antigua, 689
Salvador, Brazil, 2,172
San Juan, Puerto Rico, 876
Sint Nicolaas, Aruba, 856
Wilmington, North Carolina, U.S.A.,
2,011

GEORGETOWN, MALAYSIA. See
Penang.

GERALDTON, AUSTRALIA
(28°47'00" S., 114°35'00" E.) to:

Junction Points*
Cape Leeuwin, Australia, 356

Lombok Strait, Indonesia, 1,242
Sunda Strait, Indonesia, 1,494

Ports
Albany, Australia, 525
Darwin, Australia, 1,638
Fremantle, Australia, 213

G'HAZAOUET, ALGERIA
(35°06'18" N., 1°51'30" W.) to:

Junction Points*
Port Said, U.A.R., 1,784
Strait of Gibraltar, 199

Ports
Alger, Algeria, 278
Alicante, Spain, 209
Malaga, Spain, 158

GHEENT, BELGIUM
(51°03'00" N., 3°44'00" E.)

Subtract 17 miles from Antwerpen
distances.

GIBARA, CUBA
(21°06'30" N., 76°07'00" W.) to:

Junction Points*
Straits of Florida, 447

Ports
Charleston, South Carolina, U.S.A.,
806
New York, New York, U.S.A., 1,216
Nuevitas, Cuba, 82
Port Antonia, Jamaica, 323

GIBRALTAR
(36°08'00" N., 5°21'30" W.) to:

Junction Points*
Port Said, U.A.R., 1,925
Strait of Gibraltar, 24

Ports
Alexandria, U.A.R., 1,805
Alger, Algeria, 420
Alicante, Spain, 300
Ancona, Italy, 1,563
Annaba, Algeria, 658
Banghazi, Libya, 1,338
Barcelona, Spain, 516
Bari, Italy, 1,356
Bayrut, Lebanon, 2,017
Brindisi, Italy, 1,298
Cartagena, Spain, 241

*JUNCTION POINT.—See Preface for use of junction points.

Genova, Italy, 850
 Guantanamo, Cuba (via Turks Island Passage), 3,767
 Haifa, Israel, 2,014
 Iraklion, Crete, 1,499
 Istanbul, Turkey (via Corinth Canal), 1,787
 Istanbul, Turkey (south of Greece), 1,804
 Izmir, Turkey (via Corinth Canal), 1,633
 Izmir, Turkey (south of Greece), 1,650
 La Spezia, Italy, 873
 Livorno, Italy, 869
 Marseille, France, 693
 Messina, Sicily, 1,031
 Napoli, Italy, 983
 Odessa, U.S.S.R. (via Corinth Canal), 2,135
 Odessa, U.S.S.R. (south of Greece), 2,152
 Oran, Algeria, 237
 Palermo, Sicily, 922
 Palma, Balearic Islands, 453
 Piraeus, Greece (via Corinth Canal), 1,433
 Piraeus, Greece (south of Greece), 1,490
 Rijeka, Yugoslavia, 1,630
 Savona, Italy, 835
 Sfax, Tunisia, 1,026
 Sibenik, Yugoslavia, 1,504
 Siracusa, Sicily, 1,037
 Split, Yugoslavia, 1,489
 Tarabulus, Libya, 1,076
 Taranto, Italy, 1,250
 Thessaloniki, Greece (via Corinth Canal), 1,682
 Thessaloniki, Greece (south of Greece), 1,698
 Toulon, France, 705
 Trieste, Free Territory, 1,664
 Tunis, Tunisia, 803
 Valencia, Spain, 386
 Valletta, Malta, 988
 Venezia, Italy, 1,674
 Volos, Greece (via Corinth Canal), 1,623
 Volos, Greece (south of Greece), 1,640

GIBRALTAR, STRAIT OF. See Strait of Gibraltar.

GIJON, SPAIN

(43°33'00" N., 5°40'30" W.) to:

Junction Points*
 Ushant, France, 294

Ports
 Casablanca, Morocco, 763
 Horta, Azores, 1,092
 Porto de Leixoes, Portugal, 309
 St. Nazaire, France, 274

GLADSTONE HARBOR, AUSTRALIA

(23°50'00" S., 151°15'30" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 2,688
 Torres Strait, Australia, 1,085

Ports
 Brisbane, Australia, 314
 Port Moresby, Papua, 1,389
 Wellington, New Zealand, 1,678

GLASGOW, SCOTLAND

(55°51'45" N., 4°18'00" W.) to:

Junction Points*
 Bishop Rock, England, 402
 Fastnet, Ireland, 395
 Inishtrahull, Ireland, 146
 Pentland Firth, Scotland (via The Minch), 384

Ports
 Ardrossan, Scotland, 43
 Avonmouth, England, 390
 Barrow in Furness, England, 172
 Boulogne, France, 672
 Cairn Ryan, Scotland, 82
 Cardiff, Wales, 375
 Cobh, Ireland, 346
 Fishguard, Wales, 247
 Loch Ewe, Scotland, 303
 Londonderry, Ireland, 145
 Reykjavik, Iceland, 860
 Stornoway, Scotland, 283
 Workington, England, 145

GLOUCESTER, ENGLAND

(51°52'00" N., 2°13'00" W.)

Add 34 miles to Avonmouth distances.

GODHAVN, GREENLAND

(69°14'00" N., 53°32'00" W.) to:

Junction Points*
 Inishtrahull, Ireland (direct), 1,901
 Inishtrahull, Ireland (via 75 miles off Kap Farvel), 1,953

Ports
 Angmagssalik, Greenland (direct), 1,132
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,257
 Ivigtut, Greenland, 560
 Reykjavik, Iceland (direct), 1,396
 Reykjavik, Iceland (via 75 miles off Kap Farvel), 1,483

GODTHAB, GREENLAND

(64°10'45" N., 51°45'15" W.) to:

Junction Points*
 Pentland Firth, Scotland, 1,630
 Strait of Gibraltar, 2,477

Ports
 Churchill, Canada, 1,331
 Reykjavik, Iceland, 1,076
 St. John's, Canada, 1,005

GOLCUK, TURKEY

(40°44'00" N., 29°49'00" E.)

Add 34 miles to Istanbul distances for ports outside the Black Sea and Sea of Marmara.

GOLFE-JUAN, FRANCE

(43°34'00" N., 7°05'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,462
 Strait of Gibraltar, 780

Ports
 Barcelona, Spain, 268
 Genova, Italy, 101
 Palma, Balearic Islands, 365

GOLFITO, COSTA RICA

(8°38'30" N., 83°10'30" W.) to:

Junction Points*
 Panama, Panama, 334

Ports
 Acapulco, Mexico, 1,123
 Ampala, Honduras, 432
 Buenaventura, Colombia, 426
 La Union, El Salvador, 432

GOLFO DI ORISTANO, SARDINIA, ITALY

(39°49'00" N., 8°26'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,343
 Strait of Gibraltar, 716

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Annaba, Algeria, 176
Genova, Italy, 285
Marseille, France, 264

GONAIVES, HAITI
(19°27'00" N., 72°42'00" W.) to:

Junction Points*
Panama, Panama, 805

Ports
Kingston, Jamaica, 263
New York, New York, U.S.A., 1,328
Port au Prince, Haiti, 70

GOOLE, ENGLAND
(53°42'00" N., 0°51'00" W.)

Add 27 miles to Hull distances.

GOOSE BAY, CANADA
(53°22'00" N., 60°18'00" W.) to:

Junction Points*
Inishtrahull, Ireland, 1,812
Strait of Gibraltar, 2,538

Ports
Churchill, Canada, 1,557
Reykjavik, Iceland, 1,332
St. John's, Canada, 588

GOTEBORG, SWEDEN
(57°42'00" N., 11°57'00" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 230
Skagens Odde, Denmark, 42

Ports
Assens, Denmark, 197
Bergen, Norway, 356
Faborg, Denmark, 222
Flensburg, Germany, 272
Fredericia, Denmark, 181
Grena, Denmark, 102
Haderslev, Denmark, 203
Hobro, Denmark, 123
Kolding, Denmark, 330
Middelfart, Denmark, 173
Naestved, Denmark, 199
Nakskov, Denmark, 201
Oslo, Norway, 159
Sonderborg, Denmark, 239
Vejele, Denmark, 176

GRAND-BASSAM, IVORY COAST
(5°11'00" N., 3°43'00" W.) to:

Ports
Accra, Ghana, 230
Freetown, Sierra Leone, 737
Lagos, Nigeria, 556
Monrovia, Liberia, 479

GRAND TURK, GRAND TURK ISLAND
(21°28'30" N., 71°08'00" W.) to:

Junction Points*
Panama, Panama, 947
Straits of Florida, 721

Ports
Fort-Liberte, Haiti, 122
New York, New York, U.S.A., 1,167
Nuevitas, Cuba, 368

GRANGEMOUTH, SCOTLAND
(56°02'00" N., 03°41'20" W.)

For distances outside the Firth of Forth, add 15 miles to Leith distances.

GRANVILLE, FRANCE
(48°50'00" N., 1°36'15" W.) to:

Junction Points*
Bishop Rock, England, 267
Ushant, France, 158

Ports
Dover, England, 181
Le Harve, France, 173
Plymouth, England, 149

GRAVESEND, ENGLAND
(51°26'45" N., 0°22'30" E.)

Subtract 16 miles from London distances.

GREAT HARBOR, CULEBRA ISLAND
(18°18'00" N., 65°17'00" W.) to:

Junction Points*
Straits of Florida (via Old Bahama Channel), 1,068
Yucatan Channel (via Windward Passage and south of Cuba), 1,170

Ports
Cartagena, Colombia (via South Channel), 803

Charleston, South Carolina, U.S.A., 1,176
Christiansted, St. Croix, 50
Colon, Panama (via South Channel and outside Crab Island), 1,018
Guantanamo, Cuba (via Windward Passage), 588
Key West, Florida, U.S.A. (north of Hispaniola, and via Old Bahama Channel), 1,017
New York, New York, U.S.A., 1,422
Porlamar, Venezuela, 470
San Juan, Puerto Rico, 58
Santa Barbara de Samana, Dominican Republic, 242
Santo Domingo, Dominican Republic, 290

GREAT WOOD BAY ANCHORAGE.
See Jan Mayen.

GREENOCK, SCOTLAND
(55°57'00" N., 4°45'00" W.)

Subtract 17 miles from Glasgow distances.

GREENVILLE, LIBERIA
(4°59'30" N., 9°02'55" W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,826
Ushant, France, 2,981

Ports
Dakar, Senegal, 831
Takoradi, Ghana, 461

GRENA, DENMARK
(56°24'45" N., 10°56'20" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 140
Skagens Odde, Denmark, 115

Ports
Gdynia, Poland, 361
Goteborg, Sweden, 102
Lubeck, Germany, 169

GRENADA. See St. Georges, Grenada.

GREYTOWN, NICARAGUA. See San Juan del Norte.

*JUNCTION POINT.—See Preface for use of junction points.

GRIMSBY, ENGLAND
(53°36'00" N., 0°01'00" W.)

Subtract 14 miles from Hull distances.

GRIMSTAD, NORWAY
(58°20'20" N., 8°36'05" E.) to:Junction Points*
Pentland Firth, Scotland, 399Ports
Bergen, Norway, 250
London, England, 542
Oslo, Norway, 135**GRONDOL, GREENLAND.** See
Gronne Dal.**GRONNE DAL, GREENLAND**
(61°14'06" N., 48°06'30" W.) to:Junction Points*
Pentland Firth, Scotland, 1,433
Strait of Gibraltar, 2,309Ports
Churchill, Canada, 1,418
Reykjavik, Iceland, 960
St. John's Canada, 847**GROTON, CONNECTICUT, U.S.A.**
(41°21'30" N., 72°05'15" W.)

Use New London distances.

GRUZ, YUGOSLAVIA. See Dubrovnik.**GUAM.** See Apra.**GUANICA, PUERTO RICO**
(17°58'00" N., 66°55'30" W.) to:Ports
Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 572
Santiago de Cuba, Cuba (south of Hispaniola), 584**GUANTA, VENEZUELA**
(10°14'43" N., 64°35'30" W.)

Add 1 mile to Puerto la Cruz distances.

GUANTANAMO, CUBA
(19°54'00" N., 75°11'00" W.) to:Junction Points*
Bishop Rock, England (via Caicos Passage and track A), 3,698
Fastnet, Ireland (track A), 3,589
Fastnet, Ireland (track B), 3,585
Inishtrahull, Ireland (track A), 3,714
Inishtrahull, Ireland (track B), 3,705
Inishtrahull, Ireland (track C), 3,689
Panama, Panama, 752
Pentland Firth, Scotland (track A), 3,920
Pentland Firth, Scotland (track B), 3,904
Pentland Firth, Scotland (track C), 3,869
Strait of Gibraltar, 3,737
Straits of Florida, 638
Yucatan Channel, 582Ports
Angmagssalik, Greenland (direct), 3,215
Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,229
Argentia, Canada, 1,976
Arkhangelsk, U.S.S.R., 5,156
Bahia Honda, Cuba, 643
Barranquilla, Colombia, 534
Belem, Brazil, 2,214
Bluefields, Nicaragua, 710
Boston, Massachusetts, U.S.A. (via Windward Passage, Crooked Island Passage, and Nantucket Light Vessel), 1,495
Brest, France, 3,784
Buenos Aires, Argentina, 5,278
Cap Haïtien, Haiti, 175
Cape Town, Republic of South Africa, 6,290
Cardenas, Cuba, 539
Cartagena, Colombia, 586
Castries, St. Lucia, 922
Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 900
Charlotte Amalie, Virgin Islands (north of Hispaniola and Puerto Rico), 607
Christiansted, St. Croix (north of Hispaniola and Puerto Rico), 635
Christiansted, St. Croix (south of Hispaniola), 689
Cienfuegos, Cuba, 366
Colon, Panama, 689
Dakar, Senegal, 3,312
Elizabeth Harbor, Bahamas, 334
Freetown, Sierra Leone, 3,650Funchal, Madeira Island, 3,194
Georgetown, British Guiana, 1,316
Gibraltar (via Turks Island Passage), 3,767
Great Harbor, Culebra Island (north of Hispaniola), 588
Habana, Cuba (via Old Bahama Channel), 600
Halifax, Canada, 1,634
Hamilton, Bermuda, 992
Horta, Azores (via Mouchoir Passage), 2,666
Ivigtut, Greenland, 2,873
Jacksonville, Florida, U.S.A., 851
Key West, Florida, U.S.A. (via Old Bahama Channel), 587
Kingston, Jamaica, 180
Kralendijk, Bonaire, 620
La Guaira, Venezuela, 737
Lisboa, Portugal, 3,570
Manzanillo, Cuba, 206
Matanzas, Cuba, 553
Miami, Florida, U.S.A., 582
Monrovia, Liberia, 3,828
Montevideo, Uruguay, 5,167
Nassau, Bahamas, 503
New York, New York, U.S.A., 1,312
Norfolk, Virginia, U.S.A., 1,117
Nuevitas, Cuba, 284
Oranjestad, St. Eustatius, 771
Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 1,284
Pointe a Pitre, Guadeloupe, 879
Ponce, Puerto Rico (north of Hispaniola and Mona Passage), 540
Porlamar, Venezuela, 884
Port au Prince, Haiti, 179
Port of Spain, Trinidad, 987
Port Plata, Dominican Republic (via Windward Passage), 262
Porto Grande, Cape Verde Islands, 2,853
Portsmouth, New Hampshire, U.S.A. (via Crooked Island Passage, Windward Passage, and Nantucket Light Vessel), 1,512
Puerto Cortes, Honduras, 770
Reykjavik, Iceland, 3,434
Rio de Janeiro, Brazil, 4,170
St. Johns, Antigua, 837
San Juan, Puerto Rico (north of Hispaniola), 537
Santa Cruz de Tenerife, Canary Islands, 3,265
Santa Cruz del Sur, Cuba, 222
Santo Domingo, Dominican Republic, 397
Sint Nicolaas, Aruba, 544
Tampico, Mexico, 1,297
Veracruz, Mexico, 1,228
Willemstad, Curacao, 595

*JUNCTION POINT.—See Preface for use of junction points.

GUAYAQUIL, ECUADOR

(2°12'00" S., 79°53'00" W.) to:

Junction Points*

Panama, Panama, 824
 Punta Arenas, Chile, 3,307
 Singapore (via Surigao Strait), 10,726
 Torres Strait, Australia (via Raine Island entrance), 8,270

Ports

Acapulco, Mexico, 1,708
 Amapala, Honduras, 1,167
 Antofagasta, Chile, 1,470
 Apra, Guam, 8,147
 Archipelago de Colon, 656
 Arica, Chile, 1,251
 Auckland, New Zealand, 6,087
 Baie du Controleur, Marquesas, 3,656
 Brito, Nicaragua, 985
 Buenaventura, Colombia, 608
 Caldera, Chile, 1,632
 Callao, Peru, 712
 Ching-tao, China, 8,880
 Coquimbo, Chile, 1,781
 Corinto, Nicaragua, 1,071
 Corral, Chile, 2,313
 Dutch Harbor, Alaska, U.S.A., 5,552
 Esmeraldas, Ecuador, 356
 Guaymas, Mexico, 2,640
 Hai-kou, China, 9,755
 Hong Kong, B.C.C., 9,505
 Honolulu, Hawaii, U.S.A., 4,853
 Iquique, Chile, 1,317
 Kodiak, Alaska, U.S.A., 5,212
 Los Angeles, California, U.S.A., 3,218
 Lota, Chile, 2,155
 Manila, Philippines, 9,615
 Midway Island, 5,944
 Mollendo, Peru, 1,126
 Monterey, California, U.S.A., 3,434
 Noumea, New Caledonia, 6,686
 Pago Pago, American Samoa, 5,450
 Palmyra Island, 5,007
 Papeete, Society Islands, 4,237
 Pisco, Peru, 788
 Portland, Oregon, U.S.A., 4,169
 Puntarenas, Costa Rica, 787
 Sai Gon, Vietnam (north of Luzon), 10,321
 Salaverry, Peru, 440
 Salina Cruz, Mexico, 1,495
 San Blas, Mexico, 2,184
 San Diego, California, U.S.A., 3,112
 San Francisco, California, U.S.A., 3,548
 San Jose, Guatemala, 1,242
 Santa Barbara, California, U.S.A., 3,249
 Seattle, Washington, U.S.A., 4,326
 Shang-hai, China, 8,872
 Sitka, Alaska, U.S.A., 4,817

Suva, Fiji Islands, 6,067
 Sydney, Australia, 7,268
 Talara, Peru, 180
 Talcahuano, Chile, 2,135
 Truk, Caroline Islands, 7,752
 Valparaiso, Chile, 1,980
 Vladivostok, U.S.S.R., 8,044
 Wake Island, 6,843
 Yokohama, Japan, 7,987

GUAYMAS, MEXICO

(27°55'00" N., 110°54'00" W.) to:

Junction Points*

Panama, Panama, 2,370
 Punta Arenas, Chile, 5,401

Ports

Acapulco, Mexico, 958
 Antofagasta, Chile, 3,894
 Arica, Chile, 3,681
 Callao, Peru, 3,117
 Coquimbo, Chile, 4,153
 Corinto, Nicaragua, 1,738
 Esmeraldas, Ecuador, 2,467
 Guayaquil, Ecuador, 2,640
 Iquique, Chile, 3,750
 La Libertad, Mexico, 182
 Los Angeles, California, U.S.A., 1,158
 Lota, Chile, 4,442
 Mazatlan, Mexico, 388
 Mollendo, Peru, 3,556
 Monterey, California, U.S.A., 1,410
 Pisco, Peru, 3,227
 Puntarenas, Costa Rica, 1,956
 Salina Cruz, Mexico, 1,260
 San Blas, Mexico, 501
 San Diego, California, U.S.A., 1,088
 San Francisco, California, U.S.A., 1,490
 San Jose, Guatemala, 1,520
 Santa Barbara, California, U.S.A., 1,225
 Talcahuano, Chile, 4,428
 Valparaiso, Chile, 4,291

GUIRIA, VENEZUELA

(10°34'45" N., 62°16'15" W.) to:

Junction Points*

Panama, Panama, 1,200
 Strait of Gibraltar, 3,430
 Straits of Florida, 2,099

Ports

Belem, Brazil, 1,226
 La Guaira, Venezuela, 339
 Recife, Brazil, 2,208
 Rio de Janeiro, Brazil, 3,284
 Rio Grande, Brazil, 3,984
 Santos, Brazil, 3,467

GULFPORT, MISSISSIPPI, U.S.A.

(30°21'30" N., 89°05'30" W.) to:

Junction Points*

Panama, Panama, 1,413
 Straits of Florida, 494
 Yucatan Channel, 534

Ports

Alvaro Obregon, Mexico, 755
 Belize, British Honduras, 838
 Campeche, Mexico, 652
 Cap Haitien, Haiti, 1,145
 Carmen, Mexico, 725
 Cartagena, Colombia, 1,449
 Cienfuegos, Cuba, 851
 Colon, Panama, 1,370
 Habana, Cuba, 564
 Pointe a Pitre, Guadeloupe (via Virgin Passage and Old Bahama Channel), 1,822
 Pointe a Pitre, Guadeloupe (via Old Bahama Channel and Mona Passage), 1,823
 Port au Prince, Haiti (via Old Bahama Channel and Windward Passage), 1,176
 San Juan del Norte, Nicaragua (via inside route), 1,237
 Tampico, Mexico, 725
 Tuxpan, Mexico, 751
 Veracruz, Mexico, 800

HABANA, CUBA

(23°08'00" N., 82°20'30" W.) to:

Junction Points*

Bishop Rock, England (track A), 4,000
 Bishop Rock, England (track B), 3,974
 Bishop Rock, England (track C), 3,926
 Fastnet, Ireland (track A), 3,880
 Fastnet, Ireland (track B), 3,851
 Fastnet, Ireland (track C), 3,795
 Inishtrahull, Ireland (track A), 4,024
 Inishtrahull, Ireland (track B), 3,988
 Inishtrahull, Ireland (track C), 3,910
 Montreal, Canada (via Strait of Canso), 2,473
 Pentland Firth, Scotland (track A), 4,220
 Pentland Firth, Scotland (track B), 4,174
 Pentland Firth, Scotland (track C), 4,073
 Punta Arenas, Chile (east of South America), 6,800
 Strait of Gibraltar, 4,024
 Straits of Florida, 87
 Yucatan Channel, 186

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Alvaro Obregon, Mexico, 699
 Apalachicola, Florida, U.S.A., 426
 Belem, Brazil, 2,654
 Belize, British Honduras, 528
 Bluefields, Nicaragua (via inside), 815
 Bocas del Toro, Panama, 981
 Bordeaux, France (track A), 4,266
 Bordeaux, France (track B), 4,245
 Bordeaux, France (track C), 4,217
 Boston, Massachusetts, U.S.A., 1,428
 Bridgeport, Connecticut, U.S.A., 1,292
 Buenos Aires, Argentina, 5,724
 Caibarien, Cuba, 208
 Campeche, Mexico, 561
 Cap Haitien, Haiti, 631
 Cape Town, Republic of South Africa, 6,736
 Cardenas, Cuba, 88
 Carmen, Mexico, 639
 Cartagena, Colombia (via Old Bahama Channel), 1,142
 Castries, St. Lucia (via Mona Passage), 1,370
 Charleston, South Carolina, U.S.A., 645
 Charlotte Amalie, Virgin Islands, 1,048
 Charlottetown, Canada, 1,846
 Cienfuegos, Cuba, 482
 Corpus Christi, Texas, U.S.A., 864
 Fort de France, Martinique (via Old Bahama Channel and Mona Passage), 1,350
 Fort de France, Martinique (via Yucatan Channel), 1,655
 Galveston, Texas, U.S.A., 769
 Georgetown, British Guiana, 1,830
 Guantanamo, Cuba (via Old Bahama Channel and Windward Passage), 600
 Gulfport, Mississippi, U.S.A., 564
 Halifax, Canada, 1,640
 Hamilton, Bermuda, 1,158
 Isabela, Cuba, 151
 Jacksonville, Florida, U.S.A., 528
 Key West, Florida, U.S.A., 92
 Kingston, Jamaica (via Windward Passage), 762
 Kingston, Jamaica (via Yucatan Channel), 737
 La Guaira, Venezuela (via Old Bahama Channel and Windward Passage), 1,292
 Lake Charles, Louisiana, U.S.A., 750
 Limon, Costa Rica, 1,170
 Maracaibo, Venezuela, 1,173
 Miami, Florida, U.S.A., 222
 Mobile, Alabama, U.S.A., 553
 Nassau Bahamas (via Northwest Providence Channel), 390
 New Haven, Connecticut, U.S.A., 1,280

New Orleans, Louisiana, U.S.A., 602
 New York, New York, U.S.A., 1,199
 Norfolk, Virginia, U.S.A., 992
 Nuevitas, Cuba, 344
 Pensacola, Florida, U.S.A., 515
 Philadelphia, Pennsylvania, U.S.A., 1,162
 Pointe a Pitre, Guadeloupe (via Virgin Passage), 1,308
 Pointe a Pitre, Guadeloupe (via Mona Passage), 1,309
 Ponce, Puerto Rico (via Old Bahama Channel and Mona Passage), 981
 Port Arthur, Texas, U.S.A., 749
 Port au Prince, Haiti, 662
 Port of Spain, Trinidad (via Old Bahama Channel and Mona Passage), 1,494
 Progreso, Mexico, 430
 Puerto Barrios, Guatemala, 608
 Puerto Cabello, Venezuela (via Old Bahama Channel and Windward Passage), 1,260
 Puerto Colombia, Colombia (via Yucatan Channel), 1,068
 Puerto Manati, Cuba, 353
 Puerto Mexico, Mexico (north of Banco de Campeche), 840
 Puerto Siboney, Cuba (via Yucatan Channel), 729
 Puerto Tanamo, Cuba, 444
 Puerto Vita, Cuba, 400
 Recife, Brazil (via Old Bahama Channel and Mona Passage), 3,551
 Rio de Janeiro, Brazil, 4,623
 Rio Yateras, Cuba, 577
 St. Pierre, Martinique, 1,339
 San Juan, Puerto Rico (via Old Bahama Channel), 978
 San Juan del Norte, Nicaragua (via inside), 871
 Santa Cruz del Sur, Cuba, 542
 Santiago de Cuba, Cuba (via Windward Passage), 650
 Santiago de Cuba, Cuba (via Yucatan Channel), 733
 Santo Domingo, Dominican Republic, 946
 Savannah, Georgia, U.S.A., 606
 Tampa, Florida, U.S.A., 307
 Tampico, Mexico, 864
 Tuxpan, Mexico, 847
 Veracruz, Mexico, 814
 Willemstad, Curacao, 1,144
 Wilmington, North Carolina, U.S.A., 767

HACHINOHE, JAPAN

(40°32'00" N., 141°33'00" E.) to:

Ports

Hakodate, Japan, 108

Muroran, Japan, 123
 Nagoya, Japan, 577
 Naha, Ryukyu Islands, 1,239
 Yokohama, Japan, 436

HADERSLEV, DENMARK

(55°15'12" N., 9°30'45" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 72
 Skagens Odde, Denmark, 216

Ports

Goteborg, Sweden, 203
 Kobenhavn, Denmark, 175
 Lubeck, Germany, 137

HAFNARFJORDHUR, ICELAND

(64°04'05" N., 21°58'36" W.) to:

Junction Points*

Pentland Firth, Scotland, 680
 Strait of Gibraltar, 1,956

Ports

Bergen, Norway, 884
 Murmansk, U.S.S.R., 1,530
 St. John's, Canada, 1,413

HAGATA, JAPAN

(33°36'45" N., 130°23'15" E.) to:

Ports

Hakodate, Japan, 709
 Kobe, Japan, 304
 Misumi, Japan, 161
 Nagasaki, Japan, 121
 Ube, Japan, 84
 Yokohama, Japan, 608

HAIFA, ISRAEL

(32°49'25" N., 35°00'00" E.) to:

Junction Points*

Port Said, U.A.R., 171
 Strait of Gibraltar, 2,031

Ports

Alexandria, U.A.R., 295
 Alger, Algeria, 1,602
 Alicante, Spain, 1,769
 Al Mina Al Bayda, Syria, 175
 Ancona, Italy (via Corinth Canal), 1,248
 Ancona, Italy (south of Greece), 1,272
 Annaba, Algeria, 1,378
 Banghazi, Libya, 783
 Baniyas, Syria, 153
 Barcelona, Spain, 1,699

*JUNCTION POINT.—See Preface for use of junction points.

Bari, Italy (via Corinth Canal), 1,041
 Bari, Italy (south of Greece), 1,065
 Bayrut, Lebanon, 76
 Bizerte, Tunisia, 1,273
 Brindisi, Italy (via Corinth Canal), 983
 Brindisi, Italy (south of Greece), 1,007
 Cartagena, Spain, 1,794
 Ceuta, Morocco, 2,012
 Civitavecchia, Italy, 1,321
 Genova, Italy, 1,505
 Gibraltar, 2,014
 Iraklion, Crete, 522
 Istanbul, Turkey, 849
 Izmir, Turkey, 654
 Kyrenia, Cyprus, 246
 La Spezia, Italy, 1,469
 Livorno, Italy, 1,433
 Malaga, Spain, 1,961
 Marseille, France, 1,596
 Matruh, U.A.R., 410
 Messina, Sicily, 1,023
 Napoli, Italy, 1,194
 Odessa, U.S.S.R., 1,197
 Oran, Algeria, 1,800
 Palermo, Sicily, 1,139
 Palma, Balearic Islands, 1,645
 Paphos, Cyprus, 449
 Piraievs, Greece, 650
 Rijeka, Yugoslavia (via Corinth Canal), 1,315
 Rijeka, Yugoslavia (south of Greece), 1,342
 Savona, Italy, 1,515
 Sayda, Lebanon, 49
 Sibenik, Yugoslavia (via Corinth Canal), 1,187
 Sibenik, Yugoslavia (south of Greece), 1,214
 Siracusa, Sicily, 1,013
 Split, Yugoslavia (via Corinth Canal), 1,172
 Split, Yugoslavia (south of Greece), 1,199
 Sur, Lebanon, 33
 Tarabulus, Lebanon, 118
 Tarabulus, Libya, 1,109
 Taranto, Italy (via Corinth Canal), 1,003
 Taranto, Italy (south of Greece), 1,020
 Thessaloniki, Greece, 786
 Toulon, France, 1,565
 Trieste, Free Territory (via Corinth Canal), 1,348
 Trieste, Free Territory (south of Greece), 1,375
 Tunis, Tunisia, 1,260
 Valencia, Spain, 1,767
 Valletta, Malta, 1,038
 Venezia, Italy (via Corinth Canal), 1,359
 Venezia, Italy (south of Greece), 1,383

Volos, Greece, 728
 Yumurtalik, Turkey, 240

HAI-KOU, HAI-NAN TAO, CHINA
 (20°04'00" N., 110°17'00" E.) to:

Junction Points*
 Panama, Panama, 9,449
 Singapore, 1,338
 Torres Strait, Australia, 2,801

Ports
 Apra, Guam, 2,015
 Ching-tao, China (north of Taiwan), 1,370
 Darwin, Australia, 2,437
 Dutch Harbor, Alaska, U.S.A. (south of Honshu and Taiwan), 4,385
 Dutch Harbor, Alaska, U.S.A. (via Tsugaru Strait and north of Taiwan), 4,276

Guayaquil, Ecuador, 9,755
 Hong Kong, B.C.C., 267
 Honolulu, Hawaii, U.S.A., 5,082
 Kodiak, Alaska, U.S.A., 4,866
 Manila, Philippines, 720
 Midway Island, 3,950
 Nikolayevsk, U.S.S.R. (via South Channel), 2,644
 Noumea, New Caledonia, 4,270
 Pago Pago, American Samoa, 5,130
 Palmyra Island, 5,147
 Papeete, Society Islands, 6,327
 Petropavlovsk, U.S.S.R., 3,102
 Rabaul, New Britain, 2,943
 Sai Gon, Vietnam, 824
 San Diego, California, U.S.A., 6,696
 Shang-hai, China, 1,132
 Sitka, Alaska, U.S.A., 5,345
 Surabaya, Indonesia, 1,835
 Suva, Fiji Islands, 4,694
 Truk, Caroline Islands, 2,565
 Valparaiso, Chile, 10,365
 Vinh Cam Ranh, Vietnam, 610
 Vladivostok, U.S.S.R., 1,899
 Wake Island, 3,168
 Yokohama, Japan (south of Taiwan), 1,910

HAINA, DOMINICAN REPUBLIC
 (18°25'20" N., 70°00'20" W.) to:

Junction Points*
 Panama, Panama, 845

Ports
 Barranquilla, Colombia, 536
 Kingston, Jamaica, 417
 San Juan, Puerto Rico, 249
 Willemstad, Curacao, 394

HAIPHONG, VIETNAM
 (20°52'00" N., 106°41'00" E.) to:

Ports
 Cebu, Philippines (via Jintotolo Channel, Romblon, and Verde Island Passage), 1,276
 Chang-Kan, China, 156
 Hong Kong, B.C.C., 477
 Kobe, Japan, 1,833
 Manila, Philippines, 936
 Qui Nhon, Vietnam, 469
 Sai Gon, Vietnam, 802
 San-ya Chiang, China, 253
 Shang-hai, China (via Pai-chieh Hsia, Steep Island Passage, and Hai-nan Tao), 1,285
 Vinh Cam Ranh, Vietnam, 597

HAKATA, JAPAN. See Hagata.

HAKODATE, JAPAN
 (41°47'00" N., 140°43'00" E.) to:

Junction Points*
 Panama, Panama, 7,417
 Punta Arenas, Chile, 9,457
 Singapore (via Sea of Japan), 3,160

Ports
 Akita, Japan, 150
 Aleksandrovsk, Sakhalin, 631
 Apia, Samoa, 4,252
 Apra, Guam, 1,739
 Auckland, New Zealand, 5,104
 Avarua, Cook Islands, 5,022
 Bukhta Broutona, Kuril Islands, 630
 Cebu, Philippines (via Sea of Japan), 2,177
 Cebu, Philippines (via outside route), 2,208
 Changjon, Korea, 638
 Chongjin, Korea, 509
 Darwin, Australia (via Selat Sele), 3,422
 De-Kastri, U.S.S.R., 664
 Djakarta, Indonesia (east of Direction Island and Selat Gaspar), 3,468
 Dutch Harbor, Alaska, U.S.A., 2,228
 Esutoru, U.S.S.R., 536
 Hachinohe, Japan, 108
 Hagata, Japan, 709
 Higashi-Iwase, Japan, 380
 Hiroshima, Japan, 787
 Hong Kong, B.C.C., 1,810
 Honolulu, Hawaii, U.S.A., 3,314
 Honto, U.S.S.R., 389
 Hsia-men, China, 1,559
 Hungnam, Korea, 623

*JUNCTION POINT.—See Preface for use of junction points.

Iloilo, Philippines (via Sea of Japan), 2,199
 Inchon, Korea, 1,080
 Jaluit, Marshall Islands, 2,670
 Kagoshima, Japan, 946
 Kamaishi, Japan, 192
 Kasatka, Japan, 407
 Kimchaek, Korea, 540
 Kiska, Alaska, U.S.A., 1,656
 Kobe, Japan (east of Honshu), 816
 Kochi, Japan (east of Honshu), 832
 Kochi, Japan (via Shimonoseki Kai-kyo), 894
 Kuang-chou, China, 1,893
 Kushiro, Japan, 210
 Levuka, Fiji Islands, 4,271
 Lo-hsing-ta Mao-ti, China, 1,429
 Los Angeles, California, U.S.A., 4,576
 Lu-shun, China, 1,244
 Maizuru, Japan, 460
 Manila, Philippines, 2,066
 Matsugahama, Japan, 316
 Midway Island, 2,198
 Milke, Japan, 864
 Mokpo, Korea, 897
 Nagasaki, Japan, 801
 Nakhodka, U.S.S.R., 62
 Nanao, Japan, 337
 Nase, Japan, 1,048
 Niigata, Japan, 247
 Nome, Alaska, U.S.A., 2,347
 Noumea, New Caledonia (via Canal Woodin and Canal de la Havana), 4,176
 Omura, Bonin Islands, 915
 Pago Pago, American Samoa, 4,326
 Papeete, Society Islands, 5,249
 Petropavlovsk, U.S.S.R., 1,075
 Pohang, Korea, 665
 Ponape, Caroline Islands, 2,298
 Prince Rupert, Canada (south of Aleutian Islands), 3,569
 Prince Rupert, Canada (north of Aleutian Islands), 3,487
 Pusan, Korea, 686
 Rabaul, New Britain, 2,894
 Rumoi, Japan, 248
 Sakata, Japan, 189
 San Francisco, California, U.S.A., 4,247
 Seattle, Washington, U.S.A. (north of Aleutian Islands), 3,922
 Seattle, Washington, U.S.A. (via composite sailing), 3,982
 Seward, Alaska, U.S.A. (via south of Aleutian Islands), 3,069
 Shan-tou, China, 1,660
 Shang-hai, China, 1,166
 Shelekhovo, Kuril Islands, 865
 Shimonoseki, Japan, 683
 Shiogama, Japan, 281

Sitka, Alaska, U.S.A. (south of Aleutian Islands), 3,392
 Slavnoye, Kuril Islands, 467
 Sosura, Korea, 482
 Sydney, Australia, 4,688
 Ta-ku, China, 1,385
 Ta-lien, China, 1,226
 Tan-shui, Taiwan, 1,384
 Tomari, Japan, 301
 Tsuruga, Japan, 447
 Ulsan, Korea, 661
 Unggi, Korea, 486
 Valparaiso, Chile, 9,197
 Vladivostok, U.S.S.R., 437
 Wei-hai-wei, China, 1,169
 Wonsan, Korea, 638
 Yen-tai, China, 1,203
 Yokohama, Japan, 533

HAKONSVERN, NORWAY

(60°20'30" N., 5°14'30" E.) to:

Junction Points*

Pentland Firth, Scotland, 287
 Skagens Odde, Denmark, 296

Ports

Bremerhaven, Germany, 442
 London, England, 616
 Oslo, Norway, 371

HALIFAX, CANADA

(44°39'00" N., 63°34'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 2,616
 Bishop Rock, England (track B), 2,563
 Bishop Rock, England (track C and D), 2,480
 Bishop Rock, England (track E), 2,335
 Bishop Rock, England (track F), 2,310
 Cape of Good Hope, Republic of South Africa, 6,502
 Fastnet, Ireland (track A), 2,514
 Fastnet, Ireland (track B), 2,457
 Fastnet, Ireland (tracks C and D), 2,364
 Fastnet, Ireland (track E), 2,215
 Fastnet, Ireland (track F), 2,181
 Inishtrahull, Ireland (track A), 2,642
 Inishtrahull, Ireland (track B), 2,576
 Inishtrahull, Ireland (tracks C and D), 2,462
 Inishtrahull, Ireland (track E), 2,289
 Inishtrahull, Ireland (track F), 2,238
 Montreal, Canada (via Strait of Canso), 895
 Montreal, Canada (via Cabot Strait), 955
 Panama, Panama, 2,338

Pentland Firth, Scotland (track A), 2,845
 Pentland Firth, Scotland (track B), 2,776
 Pentland Firth, Scotland (tracks C and D), 2,642
 Pentland Firth, Scotland (track E), 2,446
 Pentland Firth, Scotland (track F), 2,380
 Punta Arenas, Chile, 6,799
 Strait of Gibraltar (track A), 2,762
 Strait of Gibraltar (track B), 2,734
 Strait of Gibraltar (tracks C and D), 2,708
 Strait of Gibraltar (track E), 2,655
 Strait of Gibraltar (track F), 2,657
 Strait of Gibraltar (direct), 2,650
 Straits of Florida, 1,610
 Yucatan Channel, 1,796

Ports

Angmagssalik, Greenland (direct), 1,722
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,736
 Argentia, Canada, 448
 Arkhangelsk, U.S.S.R., 3,663
 Baltimore, Maryland, U.S.A., 911
 Belem, Brazil, 2,904
 Bocas del Toro, Panama, 2,369
 Bordeaux, France (track A), 2,898
 Bordeaux, France (track B), 2,851
 Bordeaux, France (tracks C and D), 2,786
 Bordeaux, France (track E), 2,663
 Bordeaux, France (track F), 2,646
 Boston, Massachusetts, U.S.A., 380
 Bridgeport, Connecticut, U.S.A., 552
 Bridgetown, Barbados, 1,906
 Brunswick, Georgia, U.S.A., 1,210
 Buenos Aires, Argentina, 5,731
 Cadiz, Spain (direct), 2,617
 Cadiz, Spain (tracks C and D), 2,674
 Cape Town, Republic of South Africa, 6,492
 Castries, St. Lucia, 1,850
 Charleston, South Carolina, U.S.A., 1,077
 Charlotte Amalie, Virgin Islands, 1,595
 Charlottetown, Canada (via Strait of Canso), 268
 Cienfuegos, Cuba, 1,998
 Colon, Panama, 2,295
 Dakar, Senegal, 2,956
 Frederikshaab, Greenland, 1,406
 Guantanamo, Cuba, 1,634
 Habana, Cuba, 1,614
 Hamilton, Bermuda, 756
 Ivigtut, Greenland, 1,380
 Jacksonville, Florida, U.S.A., 1,255

*JUNCTION POINT.—See Preface for use of junction points.

Key West, Florida, U.S.A., 1,556
 Kingston, Jamaica, 1,795
 La Guaira, Venezuela, 2,060
 Limon, Costa Rica, 2,368
 Lisboa, Portugal (track A), 2,564
 Lisboa, Portugal (track B), 2,532
 Lisboa, Portugal (tracks C and D), 2,500
 Lisboa, Portugal (track E), 2,433
 Lisboa, Portugal (track F), 2,436
 Miami, Florida, U.S.A., 1,413
 Montevideo, Uruguay, 5,617
 Murmansk, U.S.S.R., 3,368
 New Haven, Connecticut, U.S.A., 540
 New York, New York, U.S.A., 600
 Norfolk, Virginia, U.S.A., 790
 Parrsboro, Canada, 330
 Philadelphia, Pennsylvania, U.S.A., 746
 Ponta Delgada, Azores (direct), 1,755
 Ponta Delgada, Azores (tracks C and D), 1,785
 Port au Prince, Haiti, 1,671
 Port of Spain, Trinidad, 2,059
 Portland, Maine, U.S.A., 338
 Portsmouth, New Hampshire, U.S.A., 359
 Recife, Brazil, 3,558
 Reykjavik, Iceland, 1,941
 Rio de Janeiro, Brazil, 4,630
 St. John, Canada, 278
 St. John's, Canada, 531
 Salvador, Brazil, 3,949
 San Juan, Puerto Rico, 1,580
 Santa Cruz de Tenerife, Canary Islands (direct), 2,462
 Santa Cruz de Tenerife, Canary Islands (tracks C and D), 2,480
 Santiago de Cuba, Cuba, 1,683
 Santo Domingo, Dominican Republic, 1,709
 Savannah, Georgia, U.S.A., 1,150
 Vigo, Spain (tracks C and D), 2,454
 Vigo, Spain (track E), 2,362
 Vigo, Spain (track F), 2,358
 Wilmington, North Carolina, U.S.A., 1,016

HALMSTAD, SWEDEN
 (56°39'06" N., 12°50'36" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 188
 Skagens Odde, Denmark, 101

Ports
 Oslo, Norway, 225
 Stockholm, Sweden, 481
 Szczecin, Poland, 227

HALSINGBORG, SWEDEN
 (56°02'30" N., 12°41'30" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 176
 Skagens Odde, Denmark, 128

Ports
 Kristiansand, Norway, 220
 Oslo, Norway, 250
 Stockholm, Sweden, 436

HAMBURG, GERMANY
 (53°32'30" N., 9°59'00" E.) to:

Junction Points*
 Bishop Rock, England, 717
 Kiel Canal (east end), Germany, 91
 Pentland Firth, Scotland, 555
 Skagens Odde, Denmark, 360
 Ushant, France, 703

Ports
 Aberdeen, Scotland, 473
 Amsterdam, Netherlands, 274
 Antwerpen, Belgium, 386
 Bergen, Norway, 486
 Cherbourg, France, 538
 Den Helder, Netherlands, 249
 Dover, England, 399
 Dundee, Scotland, 485
 Dunkerque, France, 374
 Egersund, Norway, 351
 Emden, Germany, 185
 Esbjerg, Denmark, 172
 Hartlepool, England, 406
 Harwich, England, 362
 Hull, England, 384
 Inverness, Scotland, 562
 Kristiansand, Norway, 333
 Le Harve, France, 511
 Leith, Scotland, 486
 London, England, 425
 Newcastle, England, 424
 Oslo, Norway, 461
 Plymouth, England, 628
 Portland, England, 554
 Portsmouth, England, 504
 Rotterdam, Netherlands, 307
 Southampton, England, 522
 Stavanger, Norway, 403
 Wilhelmshaven, Germany, 111
 Zeebrugge, Belgium, 342

HAMILTON, BERMUDA
 (32°17'30" N., 64°47'00" W.) to:

Junction Points*
 Bishop Rock, England (track A), 2,778
 Bishop Rock, England (track B), 2,769

Cape of Good Hope, Republic of South Africa, 6,169
 Fastnet, Ireland (track A), 2,676
 Fastnet, Ireland (track B), 2,663
 Fastnet, Ireland (track C), 2,651
 Inishtrahull, Ireland (track A), 2,802
 Inishtrahull, Ireland (track B), 2,783
 Inishtrahull, Ireland (track C), 2,749
 Montreal, Canada (via Strait of Can-so), 1,572
 Panama, Panama, 1,702
 Pentland Firth, Scotland (track A), 3,007
 Pentland Firth, Scotland (track B), 2,982
 Pentland Firth, Scotland (track C), 2,929
 Punta Arenas, Chile, 6,287
 Strait of Gibraltar, 2,903
 Straits of Florida, 1,151
 Yucatan Channel, 1,321

Ports
 Baltimore, Maryland, U.S.A., 805
 Barranquilla, Colombia, 1,465
 Basseterre, St. Christopher, 941
 Belem, Brazil, 2,274
 Boston, Massachusetts, U.S.A., 704
 Bridgetown, Barbados, 1,208
 Buenos Aires, Argentina, 5,211
 Cardenas, Cuba, 1,119
 Castries, St. Lucia, 1,149
 Cayenne, French Guiana, 1,801
 Charlestown, Nevis, 937
 Charlotte Amalie, Virgin Islands, 872
 Cienfuegos, Cuba, 1,346
 Colon, Panama (via Caicos Passage and Windward Passage), 1,659
 Elizabeth Harbor, Bahamas, 813
 Georgetown, British Guiana, 1,591
 Guantanamo, Cuba (via Caicos Passage), 992
 Habana, Cuba, 1,150
 Halifax, Canada, 756
 Key West, Florida, U.S.A., 1,091
 Kingston, Jamaica, 1,144
 La Guaira, Venezuela, 1,335
 Limon, Costa Rica, 1,715
 Manzanilla, Cuba, 1,187
 Matanzas, Cuba, 1,129
 Miami, Florida, U.S.A., 956
 Montevideo, Uruguay, 5,097
 Nassau, Bahamas, 829
 New London, Connecticut, U.S.A., 667
 New York, New York, U.S.A., 697
 Norfolk, Virginia, U.S.A., 683
 Nuevitas, Cuba, 988
 Paramaribo, Surinam, 1,694
 Philadelphia, Pennsylvania, U.S.A., 746
 Plymouth, Montserrat, 966
 Port au Prince, Haiti, 1,016

*JUNCTION POINT.—See Preface for use of junction points.

Port of Spain, Trinidad, 1,346
 Portsmouth, New Hampshire, U.S.A., 723
 Recife, Brazil, 3,038
 Rio de Janeiro, Brazil, 4,110
 Roseau, Dominica Island, 1,061
 St. Georges, Grenada, 1,256
 San Juan, Puerto Rico, 856
 Santiago de Cuba, Cuba, 1,031
 Santo Domingo, Dominican Republic, 992
 Sint Nicolaas, Aruba, 1,263
 Washington, D.C., U.S.A., 806
 Wilmington, North Carolina, U.S.A., 746

HAMINA, FINLAND
 (60°30'40" N., 27°11'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 747
 Skagens Odde, Denmark, 797

Ports
 Gdynia, Poland, 512
 Riga, Latvia, 384
 Stockholm, Sweden, 325

HAMMAMET, TUNISIA. See Al Hammamat.

HAMMERFEST, NORWAY
 (70°40'00" N., 23°41'00" E.) to:

Ports
 Bergen, Norway, 817
 Harstad, Norway, 200
 Oslo, Norway (via inside route), 1, 187
 Oslo, Norway (via outside route), 1, 189
 Tromsø, Norway, 124

HAMPTON ROADS, VIRGINIA, U.S.A.
 (36°57'00" N., 76°22'00" W.)

Subtract 6 miles from Norfolk distances.

HANGO, FINLAND
 (59°49'03" N., 22°56'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 564
 Skagens Odde, Denmark, 625

Ports
 Gdynia, Poland, 356
 Leningrad, U.S.S.R., 233
 Stockholm, Sweden, 178

HANKO, FINLAND. See Hango.

HAN-KOU, CHINA
 (30°34'00" N., 114°17'30" E.) to:

Add 592 miles to Shang-hai distances for arrival ports outside the Chang Chiang (Yangtze River).

Ports
 Nan-chang, China, 231
 Nan-ching, China, 385
 Shang-hai, China, 592

HANKOW, CHINA. See Han-kou.

HARSTAD, NORWAY
 (68°45'15" N., 16°34'30" E.) to:

Junction Points*
 Skagens Odde, Denmark, 911

Ports
 Bergen, Norway, 673
 Hammerfest, Norway, 200

HARTLEPOOL, ENGLAND
 (54°41'50" N., 1°11'30" W.) to:

Junction Points*
 Bishop Rock, England, 594
 Skagens Odde, Denmark, 438
 Ushant, France, 579

Ports
 Amsterdam, Netherlands, 260
 Antwerpen, Belgium, 325
 Bremerhaven, Germany, 355
 Dunkerque, France, 281
 Emden, Germany, 308
 Esbjerg, Denmark, 336
 Hamburg, Germany, 406
 Le Havre, France, 386
 Oostende, Belgium, 265
 Plymouth, England, 502
 Portland, England, 428
 Portsmouth, England, 378
 Rotterdam, Netherlands, 269
 Southampton, England, 396
 Wilhelmshaven, Germany, 348
 Zeebrugge, Belgium, 263

HARWICH, ENGLAND
 (51°57'00" N., 1°17'00" E.) to:

Junction Points*
 Skagens Odde, Denmark, 487

Ports
 Amsterdam, Netherlands, 145
 Antwerpen, Belgium, 97
 Bremerhaven, Germany, 309
 Emden, Germany, 252
 Esbjerg, Denmark, 338
 Hamburg, Germany, 362
 Wilhelmshaven, Germany, 296

HAVANA, CUBA. See Habana.

HAVRE, FRANCE. See Le Havre.

HELSINGBORG, SWEDEN. See Halsingborg.

HELSINGFORS, FINLAND. See Helsinki.

HELSINGOR, DENMARK
 (56°02'00" N., 12°37'20" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 175
 Skagens Odde, Denmark, 127

Ports
 Kristiansand, Norway, 219
 Oslo, Norway, 249
 Stockholm, Sweden (via The Sound), 445
 Stockholm, Sweden (via Store Bælt), 629

HELSINKI, FINLAND
 (60°09'20" N., 24°55'40" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 625
 Skagens Odde, Denmark (via The Sound), 687
 Skagens Odde, Denmark (via Store Bælt), 817

Ports
 Gavle, Sweden, 292
 Gdynia, Poland, 415
 Kotka, Finland, 99
 Kobenhavn, Denmark, 772
 Leningrad, U.S.S.R., 172

*JUNCTION POINT.—See Preface for use of junction points.

Norrköping, Sweden, 307
 Ornskölsvik, Sweden, 403
 Oulu, Finland, 598
 Oxelosund, Sweden, 268
 Reposaari, Finland, 331
 Stockholm, Sweden, 239
 Uusikaupunki, Finland, 293

HIGASHI-IWASE, JAPAN
 (36°46'00'' N., 137°14'00'' E.) to:

Ports

Hakodate, Japan, 380
 Pusan, Korea, 492
 Shang-hai, China, 966
 Shimonoseki, Japan, 466
 Vladivostok, U.S.S.R., 471

HILO, HAWAII, U.S.A.
 (19°44'00'' N., 155°05'00'' W.) to:

Junction Points*

Panama, Panama, 4,527

Ports

San Diego, California, U.S.A., 2,175
 San Jose, Guatemala, 3,690
 Seattle, Washington, U.S.A., 2,387

HIMEJI KO, JAPAN. See Hirohata.

HINCHINBROOK CHANNEL, AUSTRALIA. See Lucinda.

HIROHATA, JAPAN
 (34°46'45'' N., 134°38'00'' E.) to:

Ports

Kobe, Japan, 34
 Kure, Japan, 126
 Nagasaki, Japan, 373
 Nagoya, Japan, 259
 Sakaidecho, Japan, 89
 Shimotsui, Japan, 88
 Yokohama, Japan, 368

HIROSHIMA, JAPAN
 (34°20'45'' N., 132°28'15'' E.) to:

Ports

Hakodate, Japan, 787
 Kobe, Japan, 179
 Nagasaki, Japan (via Obatake Seto and north of Kasasa Jima), 264
 Nagasaki, Japan (via Moroshima Suido), 275

Nagasaki, Japan (via Kudako Suido), 285

Nagasaki, Japan (via Nuwashima Suido), 277
 Yokohama, Japan, 519

HIRTSHALS, DENMARK
 (57°36'00'' N., 9°58'00'' E.) to:

Junction Points*

Pentland Firth, Scotland, 429
 Skagens Odde, Denmark, 30

Ports

Bergen, Norway, 280
 London, England, 541
 Oslo, Norway, 145

HOBART, TASMANIA
 (42°53'00'' S., 147°21'00'' E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,628
 Panama, Panama, 7,630
 Torres Strait, Australia, 2,271

Ports

Aden, Aden Protectorate, 6,598
 Albany, Australia, 1,494
 Apia, Samoa, 2,773
 Apra, Guam, 3,683
 Auckland, New Zealand, 1,521
 Avarua, Cook Islands, 2,962
 Burnie Harbor, Australia, 332
 Catherine Hill Bay, Australia, 677
 Diego Garcia, Chagos Archipelago (east point via D'Entrecasteaux Channel), 4,501
 Dunedin, New Zealand, 1,068
 Dutch Harbor, Alaska, U.S.A., 6,365
 Honolulu, Hawaii, U.S.A., 4,930
 Jaluit, Marshall Islands, 3,223
 Kiama Harbor, Australia, 583
 Levuka, Fiji Islands, 2,239
 Melbourne, Australia, 472
 Midway Island, 4,740
 Nandi Bay, Fiji Islands, 2,288
 Noumea, New Caledonia, 1,604
 Omura, Bonin Islands, 4,477
 Pago Pago, American Samoa, 2,783
 Papeete, Society Islands, 3,563
 Ponape, Caroline Islands, 3,130
 Port Augusta, Australia, 947
 Port Kembla, Australia, 593
 Port Lincoln, Australia, 830
 Portland, Australia, 540
 Rapid Bay, Australia, 719
 Stenhouse Bay, Australia, 766
 Suva, Fiji Islands, 2,198
 Sydney, Australia, 638
 Wellington, New Zealand, 1,288

HOBOKEN, NEW JERSEY, U.S.A.
 (40°45'00'' N., 74°01'00'' W.)

For ocean distances, add 3 miles to New York distances.

HOBRO, DENMARK
 (56°38'24'' N., 9°48'18'' E.) to:

Junction Points*

Kiel Canal (east end), Germany, 193
 Skagens Odde, Denmark, 101

Ports

Goteborg, Sweden, 123
 Lubeck, Germany, 235
 Stockholm, Sweden, 610

HODEIDA, YEMEN. See Al Hudaydah

HOEK VAN HOLLAND, NETHERLANDS
 (51°58'37'' N., 4°07'30'' E.)

Subtract 14½ miles from Rotterdam distances.

HOIHOW, HAINAN ISLAND. See Hai-kou.

HOLLANDIA, INDONESIA. See Sukarnapura.

HOLSTEINSBORG, GREENLAND
 (66°56'42'' N., 53°41'00'' W.) to:

Junction Points*

Pentland Firth, Scotland, 1,802
 Strait of Gibraltar, 2,649

Ports

Churchill, Canada, 1,384
 Reykjavik, Iceland, 1,248
 St. John's, Canada, 1,172

HOLTENAU, GERMANY. See Kiel Canal.

HOLY LOCK, SCOTLAND
 (55°59'00'' N., 4°55'00'' W.)

Subtract 20 miles from Glasgow distances.

*JUNCTION POINT.—See Preface for use of junction points.

HOLYHEAD, WALES

(53°19'30'' N., 4°38'00'' W.) to:

Junction Points*

Bishop Rock, England, 232
 Fastnet, Ireland, 232
 Inishtrahull, Ireland, 181
 Pentland Firth, Scotland, 422

Ports

Avonmouth, England, 217
 Brest, France, 345
 Cardiff, Wales, 202
 Cherbourg, France, 377
 Cobh, Ireland, 182
 Douglas, Isle of Man, 51
 Liverpool, England, 72
 London, England, 594
 Southampton, England, 414
 Swansea, Wales, 171

HOMS, LIBYA. See Al Khums.

HON GAI, VIETNAM. See Hon Gay.

HON GAY, VIETNAM

(20°57'00'' N., 107°03'30'' E.)

Add 3 miles to Haiphong distances.

HONG KONG, BRITISH CROWN COLONY

(22°17'00'' N., 114°10'00'' E.) to:

Junction Points*

Lombok Strait, Indonesia (via Linapacan Strait), 2,029
 Panama, Panama, 9,195
 Singapore, 1,454
 Sunda Strait, Indonesia, 1,807
 Torres Strait, Australia, 2,725

Ports

Aleksandrovsk, Sakhalin, 2,250
 Apia, Samoa, 4,868
 Apra, Guam, 1,322
 Auckland, New Zealand, 5,060
 Avarua, Cook Islands, 5,674
 Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 960
 Chan Chiang, China, 245
 Chang-Kan, China, 408
 Ching-iao, China, 1,120
 Chinnampo, Korea, 1,263
 Da Nang, Vietnam, 520
 Darwin Australia, 2,363

Davao, Philippines, 1,382
 Djakarta, Indonesia, 1,782
 Dutch Harbor, Alaska, U.S.A., 4,026
 Funafuti, Ellice Islands, 4,247
 Guayaquil, Ecuador, 9,505
 Hai-kou, China, 267
 Haiphong, Vietnam (via West Lamma Channel and Hainan Strait), 477
 Hakodate, Japan, 1,810
 Honolulu, Hawaii, U.S.A., 4,857
 Hsia-men, China, 290
 Hua-lien Chiang, Taiwan, 518
 Inchon, Korea, 1,202
 Jaluit, Marshall Islands, 3,370
 Kobe, Japan, 1,372
 Kodiak, Alaska, U.S.A., 4,616
 Kuang-chou, China, 83
 Levuka, Fiji Islands, 4,574
 Lo-hsing-ta Mao-ti, China, 459
 Los Angeles, California, U.S.A., 6,380
 Lu-shun, China, 1,265
 Manila, Philippines, 631
 Midway Island, 3,728
 Mokpo, Korea, 1,049
 Nagasaki, Japan, 1,069
 Nha Trang Bay, Vietnam, 678
 Nikolayevsk, U.S.S.R., 2,394
 Nome, Alaska, U.S.A., 4,145
 Noumea, New Caledonia, 4,107
 Olongapo, Philippines, 580
 Omura, Bonin Islands, 1,590
 Pago Pago, American Samoa, 4,948
 Palmyra Island, 4,922
 Papeete, Society Islands, 6,132
 Pei-hai, China, 391
 Peng-hu Chiang, Taiwan, 314
 Petropavlovsk, U.S.S.R., 2,863
 Ponape, Caroline Islands, 2,710
 Prince Rupert, Canada (south of Aleutian Islands), 5,367
 Prince Rupert, Canada (north of Aleutian Islands), 5,286
 Pusan, Korea, 1,144
 Qui Nhon, Vietnam, 592
 Rabaul, New Britain, 2,764
 Sai Gon, Vietnam (west of Paracel Islands), 917
 San Diego, California, U.S.A., 6,439
 San Fernando, Philippines, 489
 San Francisco, California, U.S.A. (via Osumi Kaikyo), 6,044
 San-men Wan, China, 650
 San-ya Chiang, China, 391
 Seattle, Washington, U.S.A. (via Osumi Kaikyo and composite sailing), 5,768
 Seward, Alaska, U.S.A. (south of Aleutian Islands), 4,867
 Shang-hai, China (via Steep Island and Pai-chieh Hsia), 824
 Shimonoseki, Japan, 1,179

Sitka, Alaska, U.S.A. (south of Aleutian Islands), 5,191

Sitka, Alaska, U.S.A. (north of Aleutian Islands), 5,095

Su-ao Chiang, Taiwan, 554

Surabaya, Indonesia, 1,925

Suva, Fiji Islands, 4,541

Tai-tung Chiang, Taiwan, 440

Ta-ku, China, 1,418

Tan-shui, Taiwan, 445

Teluk Kau, Halmahera, 1,581

Truk, Caroline Islands, 2,376

Tso-ying, Taiwan, 343

Valparaiso, Chile, 10,218

Vinh Cam Ranh, Vietnam, 707

Vladivostok, U.S.S.R., 1,646

Wake Island, 2,940

Wei-hai-wei, China, 1,190

Wonsan, Korea, 1,450

Yen-tai, China, 1,224

Yokohama, Japan, 1,585

Yu-lin Chiang, China, 383

Yung-chia, China, 595

HONNINGSVAG, NORWAY. See Sondre Honningsvag.

HONOLULU, HAWAII, U.S.A.

(21°18'30'' N., 157°52'15'' W.) to:

Junction Points*

Panama, Panama, 4,685
 Punta Arenas, Chile, 6,370
 Singapore (via Sulu Sea), 5,881
 Torres Strait, Australia (via Bougainville Strait and China Strait), 4,191
 Wilson Promontory, Australia, 4,792

Ports

Acapulco, Mexico, 3,289
 Aleksandrovsk, Sakhalin, 3,589
 Apia, Samoa, 2,260
 Apra, Guam, 3,318
 Archipelago de Colon, 4,216
 Auckland, New Zealand, 3,820
 Avarua, Cook Islands, 2,553
 Bahia Magdalena, Mexico, 2,543
 Baie du Controleur, Marquesas, 2,111
 Bikini, Marshall Islands, 1,710
 Brisbane, Australia (via Northwest Channel), 4,117
 Brito, Nicaragua, 4,155
 Butaritari, Gilbert Islands, 2,050
 Callao, Peru, 5,161
 Canton, Phoenix Islands, 1,660
 Cebu, Philippines, 4,610
 Chimbote, Peru, 5,015
 Ching-iao, China, 4,456
 Chinnampo, Korea, 4,417
 Christmas Island, North Pacific, 1,161

*JUNCTION POINT.—See Preface for use of junction points.

Dutch Harbor, Alaska, U.S.A., 2,040
 Eniwetok, Marshall Islands, 2,375
 Fanning Island, North Pacific, 1,056
 Funafuti, Ellice Islands, 2,249
 Guayaquil, Ecuador, 4,853
 Hai-kou, China, 5,082
 Hakodate, Japan, 3,314
 Hobart, Tasmania, 4,930
 Hong Kong, B.C.C., 4,857
 Hot Springs Bay, Alaska, U.S.A., 2,076
 Howland Island, 1,650
 Hsia-men, China, 4,592
 Iloilo, Philippines, 4,632
 Inchon, Korea (via Osumi Kaikyo), 4,385
 Inchon, Korea (via Maenggol Suido and Bungo Suido), 4,323
 Islas Juan Fernandez, 5,595
 Jaluit, Marshall Islands, 2,096
 Johnston Island, 717
 Kiska, Alaska, U.S.A., 2,185
 Kobe, Japan, 3,669
 Kodiak, Alaska, U.S.A., 2,231
 Koniya, Ryukyu Islands, 3,948
 Kuang-chou, China, 4,940
 Kwajalein, Marshalls, 2,125
 Lele, Caroline Islands, 2,467
 Levuka, Fiji Islands, 2,730
 Lo-hsing-ta Mao-ti, China, 4,487
 Los Angeles, California, U.S.A., 2,228
 Lu-shun, China, 4,524
 Malakal, Palau Islands, 3,997
 Manila, Philippines (via San Bernardino Strait), 4,767
 Manila, Philippines (north of Luzon), 4,869
 Midway Island, 1,149
 Mokpo, Korea (via Changjuk Suido and Mango Strait), 4,146
 Nagasaki, Japan, 3,986
 Naknek, Alaska, U.S.A., 2,404
 Nome, Alaska, U.S.A., 2,674
 Nonouti, Gilbert Islands, 2,100
 Noumea, New Caledonia, 3,371
 Nukualafa, Tonga Islands, 2,749
 Ocean Island, 2,480
 Omura, Bonin Islands, 3,283
 Pago Pago, American Samoa, 2,276
 Palmyra Island, 959
 Papeete, Society Islands, 2,381
 Petropavlovsk, U.S.S.R., 2,762
 Ponape, Caroline Islands, 2,685
 Port Hueneme, California, U.S.A., 2,170
 Portland, Oregon, U.S.A., 2,332
 Prince Rupert, Canada, 2,393
 Pusan, Korea, 3,973
 Rabaul, New Britain, 3,355
 Raoul Island, Kermadec Islands, 3,246
 Rongelap, Marshall Islands, 1,638

Rotoava, Tuamotu Archipelago, 2,358
 Sai Gon, Vietnam, 5,542
 Saipan, Mariana Islands, 3,230
 Salina Cruz, Mexico, 3,580
 Sand Bay, Great Sitkin, Alaska, U.S.A., 1,928
 Sandakan, North Borneo, 5,044
 San Diego, California, U.S.A., 2,278
 San Francisco, California, U.S.A., 2,091
 Sasebo, Japan (via Osumi Kaikyo), 4,009
 Seattle, Washington, U.S.A., 2,409
 Selwyn Bay, Solomon Islands, 3,047
 Seward, Alaska, U.S.A., 2,373
 Shang-hai, China (via Osumi Kaikyo), 4,336
 Shang-hai, China, 4,396
 Shan-tou, China, 4,688
 Shimonoseki, Japan (via Bungo Suido), 3,854
 Sitka, Alaska, U.S.A., 2,386
 Sukarnapura, Indonesia, 3,878
 Surabaya, Indonesia, 5,598
 Suva, Fiji Islands, 2,776
 Sweeper Cove, Alaska, U.S.A., 1,945
 Sydney, Australia, 4,420
 Taio Hae, Marquesas, 2,102
 Ta-ku, China (via Osumi Kaikyo), 4,677
 Ta-ku, China (via Shimonoseki Kaikyo), 4,628
 Talara, Peru, 4,806
 Ta-lien, China, 4,531
 Ta-lien, China (via Shimonoseki Kaikyo), 4,470
 Talomako, New Hebrides, 3,014
 Tan-shui, Taiwan, 4,398
 Teluk Kau, Halmahera, 4,490
 Tinian, Mariana Islands, 3,230
 Truk, Caroline Islands, 3,028
 Unalakleet, Alaska, U.S.A., 2,407
 Valparaiso, Chile, 5,919
 Vancouver, Canada, 2,423
 Victoria, Canada, 2,349
 Vladivostok, U.S.S.R., 3,725
 Wake Island, 2,004
 Wei-hai-wei, China (via Osumi Kaikyo), 4,449
 Wellington, New Zealand, 4,113
 Whittier, Alaska, U.S.A., 2,474
 Wonsan, Korea, 3,933
 Wotho, Marshall Islands, 1,470
 Wotje Island, Marshall Islands, 1,992
 Yap, Caroline Islands, 3,757
 Yen-tai, China (via Osumi Kaikyo), 4,483
 Yin-hsien, China (via Shih-peng Chiang), 4,334
 Yokohama, Japan (via great circle), 3,397

Yokohama, Japan (via rhumb line), 3,520

HONTO, U.S.S.R.
 (46°40'00" N., 141°51'00" E.) to:

Ports
 Akita, Japan, 450
 Hakodate, Japan, 389
 Korsakov, Sakhalin, 115
 Niigata, Japan, 549
 Otaru, Japan, 213

HOPETOWN, ELBOW CAY, BAHAMAS
 (26°32'00" N., 76°55'00" W.) to:

Junction Points*
 Panama, Panama, 1,203
 Straits of Florida, 415

Ports
 Jacksonville, Florida, U.S.A., 358
 Nuevitas, Cuba, 452
 San Juan, Puerto, 802

HORSENS, DENMARK
 (55°51'22" N., 9°52'30" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 131
 Skagens Odde, Denmark, 170

Ports
 Klaipeda, Lithuania, 459
 Stockholm, Sweden, 567
 Swinoujscie, Poland, 268

HORTA, FAYAL, AZORES
 (38°32'00" N., 28°37'00" W.) to:

Junction Points*
 Bishop Rock, England, 1,158
 Cape of Good Hope, Republic of South Africa, 5,152
 Inishtrahull, Ireland, 1,329
 Montreal, Canada (via Cabot Strait), 2,145
 Pentland Firth, Scotland, 1,575
 Strait of Gibraltar, 1,102
 Straits of Florida, 2,913

Ports
 Baltimore, Maryland, U.S.A., 2,409
 Bayonne, France, 1,277
 Bordeaux, France, 1,348
 Buenos Aires, Argentina, 4,997
 Cadiz, Spain, 1,070
 Castries, St. Lucia, 2,265

*JUNCTION POINT.—See Preface for use of junction points.

Christiansted, St. Croix, 2,259
 Colon, Panama, 3,260
 Dakar, Senegal, 1,559
 El Ferrol del Caudillo, Spain, 970
 Funchal, Madeira Island, 677
 Georgetown, British Guiana, 2,488
 Gijon, Spain, 1,092
 Guantanamo, Cuba (via Mouchoir Passage), 2,666
 Key West, Florida, U.S.A. (via Providence channels), 2,854
 Kingston, Jamaica, 2,818
 La Coruna, Spain, 967
 Las Palmas de Gran Canaria, Canary Islands, 914
 Lisboa, Portugal, 917
 Marin, Spain, 944
 Milford Haven, Wales, 1,266
 New York, New York, U.S.A., 2,098
 Ponta Delgada, Azores, 153
 Port Harcourt, Nigeria, 3,391
 Port of Spain, Trinidad, 2,461
 Porto Grande, Cape Verde Islands, 1,316
 Puerto de Pasajes, Spain, 1,260
 Quiberon, France, 1,290
 Rio de Janeiro, Brazil, 3,897
 Rota, Spain, 1,096
 San Juan, Puerto Rico, 2,294
 San Sebastian, Spain, 957
 Santa Cruz de Tenerife, Canary Islands, 881
 Santander, Spain, 1,090
 Sekondi, Ghana, 2,838
 Setubal, Portugal, 939
 Viana do Castelo, Portugal, 935
 Vigo, Spain, 938
 Vila Rial de Santo Antonio, Portugal, 1,046
 Villagarcia, Spain, 946
 Willemstad, Curacao, 2,683

HORTEN, NORWAY
 (59°25'00" N., 10°29'50" E.)

Subtract 30½ miles from Oslo distances.

HOT SPRINGS BAY, ALASKA, U.S.A.
 (51°47'20" N., 177°47'00" W.) to:

Junction Points*
 Panama, Panama, 5,653

Ports
 Dutch Harbor, Alaska, U.S.A., 451
 Honolulu, Hawaii, U.S.A., 2,076
 Seattle, Washington, U.S.A., 2,139

HOUSTON, TEXAS, U.S.A.
 (29°45'00" N., 95°17'20" W.)

Add 43 miles to Galveston distances.

HOWLAND ISLAND
 (0°48'00" N., 176°38'00" W.) to:

Ports
 Baker Island, 37
 Canton, Phoenix Islands, 367
 Honolulu, Hawaii, U.S.A., 1,650
 Pago Pago, American Samoa, 989
 Wake Island, 1,485

HSIA-MEN, CHINA
 (24°27'00" N., 118°04'00" E.) to:

Junction Points*
 Panama, Panama, 8,941
 Punta Arenas, Chile (via Vitiaz Strait), 9,665
 Singapore, 1,649
 Torres Strait, Australia, 2,655

Ports
 Aleksandrovsk, Sakhalin, 1,991
 Apra, Guam, 1,669
 Auckland, New Zealand, 4,990
 Cebu, Philippines (via Balintang Channel), 965
 Chi-lung Chiang, Taiwan, 227
 Chin-huang-tao, China, 1,114
 Chinampo, Korea, 1,004
 Darwin, Australia, 2,411
 Djakarta, Indonesia, 1,971
 Dutch Harbor, Alaska, U.S.A. (via Tsugaru Strait), 3,770
 Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,771
 Hakodate, Japan, 1,559
 Hong Kong, B.C.C., 290
 Honolulu, Hawaii, U.S.A., 4,592
 Iloilo, Philippines, 987
 Inchon, Korea, 943
 Kobe, Japan, 1,117
 Kuang-chou, China, 373
 Lo-hsing-ta Mao-ti, China, 200
 Lo-shun, China, 1,006
 Manila, Philippines, 662
 Mokpo, Korea, 790
 Nagasaki, Japan, 810
 Nikolayevsk, U.S.S.R. (via South Channel), 2,138
 Noumea, New Caledonia, 4,031
 Pago Pago, American Samoa, 4,819
 Papeete, Society Islands, 6,001
 Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,617

Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,596
 Pusan, Korea, 885
 Rabaul, New Britain, 2,659
 San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,788
 San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,797
 Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,537
 Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,463
 Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and south of Aleutian Islands), 5,524
 Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 5,464
 Shang-hai, China, 603
 Shan-tou, China, 146
 Shimonoseki, Japan, 920
 Surabaja, Indonesia, 2,121
 Suva, Fiji Islands, 4,389
 Sydney, Australia (via Vitiaz Strait), 4,437
 Ta-ku, China, 1,169
 Ta-lien, China, 1,008
 Tan-shui, Taiwan, 194
 Valparaiso, Chile (via Cook Strait), 10,216
 Vladivostok, U.S.S.R., 1,393
 Wei-hai-wei, China, 931
 Wonsan, Korea, 1,191
 Yen-tai, China, 978
 Ying-kou, China, 1,161
 Yokohama, Japan (via Osumi Kaikyo), 1,335

HSI-YING, CHINA. See Chan Chiang.

HUA-LIEN CHIANG, TAIWAN
 (23°58'30" N., 121°37'00" E.) to:

Ports
 Ching-tao, China, 792
 Hong Kong, B.C.C., 518
 Manila, Philippines, 648
 Pusan, Korea, 782
 Shang-hai, China, 533

HUANG-PU, CHINA
 (23°05'42" N., 113°26'30" E.)

Subtract 10 miles from Kuang-chou distances.

*JUNCTION POINT.—See Preface for use of junction points.

HUELVA, SPAIN

(37°15'00" N., 6°57'30" W.) to:

Junction Points*

Strait of Gibraltar, 102

Ports

Bilbao, Spain, 804
 Dakar, Senegal, 1,521
 Freetown, Sierra Leone, 1,999
 Funchal, Madeira Island, 578
 Lisboa, Portugal, 235
 Ponta Delgada, Azores, 914
 Porto Grande, Cape Verde Islands, 1,561
 Santa Cruz de Tenerife, Canary Islands, 715
 Vigo, Spain, 453

HULL, ENGLAND

(53°44'30" N., 0°18'00" W.) to:

Junction Points*

Bishop Rock, England, 531
 Skagens Odde, Denmark, 462
 Ushant, France, 523

Ports

Amsterdam, Netherlands, 212
 Antwerpen, Belgium, 265
 Arkhangelsk, U.S.S.R., 1,926
 Bergen, Norway, 471
 Boulogne, France, 225
 Bremerhaven, Germany, 332
 Dikson Harbor, U.S.S.R., 2,552
 Dundee, Scotland, 240
 Dunkerque, France, 223
 Egersund, Norway, 378
 Emden, Germany, 279
 Esbjerg, Denmark, 334
 Falmouth, England, 464
 Hamburg, Germany, 384
 Kristiansand, Norway, 407
 Le Havre, France, 326
 Leith, Scotland, 237
 London, England, 239
 Newcastle, England, 143
 Oostende, Belgium, 207
 Oslo, Norway, 559
 Plymouth, England, 442
 Portland, England, 368
 Portsmouth, England, 318
 Rosyth, Scotland, 248
 Rotterdam, Netherlands, 211
 Southampton, England, 336
 Stavanger, Norway, 408
 Trondheim, Norway, 752
 Wilhelmshaven, Germany, 323
 Zeebrugge, Belgium, 205

HU-LU TAO, CHINA

(40°42'30" N., 121°00'00" E.) to:

Ports

Ching-tao, China, 414
 Inchon, Korea, 412
 Shang-hai, China, 685
 Shimonoseki, Japan, 781
 Ta-ku, China, 214

HUNGNAM, KOREA

(39°49'00" N., 127°37'00" E.) to:

Ports

Hakodate, Japan, 623
 Korsakov, Sakhalin, 794
 Pusan, Korea, 328
 Shimonoseki, Japan, 397
 Vladivostok, U.S.S.R., 298

HURGHADA, U.A.R. See Al Gurdagah.**HVALFJORDHUR, ICELAND**

(64°18'30" N., 22°05'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 660
 Strait of Gibraltar, 1,944

Ports

Bergen, Norway, 887
 Murmansk, U.S.S.R., 1,531
 St. John's, Canada, 1,437

HYERES, FRANCE

(43°05'00" N., 6°12'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,474
 Strait of Gibraltar, 725

Ports

Annaba, Algeria, 384
 Barcelona, Spain, 218
 Genova, Italy, 147

IGARKA, U.S.S.R.

(67°28'00" N., 86°35'00" E.)

Add 434 miles to Dikson Harbor distances.

IJMUIDEN, NETHERLANDS

(52°28'00" N., 4°34'00" E.)

Subtract 14 miles from Amsterdam distances.

ILE D'OUessant, FRANCE. See Ushant.**ILOILO, PANAY, PHILIPPINES**

(10°42'00" N., 122°34'40" E.) to:

Junction Points*

Lombok Strait, Indonesia, 1,247
 Panama, Panama, 9,235
 Singapore (via Lumbucan Channel), 1,268

Ports

Apra, Guam, 1,366
 Batangas, Philippines, 270
 Cebu, Philippines, 176
 Djakarta, Indonesia (via Lumbucan Channel and Selat Gaspar), 1,476
 Hakodate, Japan (via Sea of Japan), 2,199
 Honolulu, Hawaii, U.S.A., 4,632
 Hsia-men, China, 987
 Inchon, Korea, 1,678
 Jesselton, North Borneo, 501
 Kobe, Japan, 1,623
 Kuang-chou, China (via Mindoro Strait), 978
 Kuching, Sarawak, 948
 Lo-hsing-ta Mao-ti, China (via Balintang Channel), 1,073
 Lu-shun, China, 1,776
 Manila, Philippines (via Verde Island Passage), 361
 Nagasaki, Japan, 1,428
 Petropavlovsk, U.S.S.R., 3,123
 Port Legaspi, Philippines, 226
 Sai Gon, Vietnam, 1,051
 San Francisco, California, U.S.A., 6,168
 Shang-hai, China, 1,343
 Shan-tou, China (via Verde Island Passage), 921
 Shimonoseki, Japan, 1,569
 Ta-ku, China, 1,929
 Tan-shui, Taiwan (via Peng-hu Lieh Tao and Balintang Channel), 1,028
 Vladivostok, U.S.S.R., 2,048
 Wei-hai-wei, China, 1,701
 Yen-tai, China, 1,735
 Yokohama, Japan, 1,784
 Zamboanga, Philippines, 241

IMABARI, JAPAN

(34°04'15" N., 133°00'30" E.) to:

Ports

Kobe, Japan, 120
 Kure, Japan, 63
 Nagoya, Japan, 341
 Shimonoseki, Japan, 123
 Yokohama, Japan, 454

*JUNCTION POINT.—See Preface for use of junction points.

IMMINGHAM, ENGLAND
 (53°38'00" N., 0°11'00" W.)

Subtract 8 miles from Hull distances.

INCHON, KOREA
 (37°28'00" N., 126°37'00" E.) to:

 Junction Points*
 Lombok Strait, Indonesia, 2,885
 Panama, Panama, 8,474
 Singapore, 2,560
 Sunda Strait, Indonesia, 2,913
 Wetar Passage, Indonesia (via Molucca Passage and Selat Manipa), 2,767

 Ports
 Aleksandrovsk, Sakhalin (via Maenggol Sudo), 1,507
 Apra, Guam (via Kaikyo Strait), 1,837
 Cebu, Philippines (via San Bernardine Strait), 1,656
 Ching-tao, China, 333
 Chin-huang-tao, China, 406
 Chinnampo, Korea, 216
 Darwin, Australia (via Molucca Passage), 3,072
 Djakarta, Indonesia, 2,894
 Hakodate, Japan, 1,080
 Hong Kong, B.C.C., 1,202
 Honolulu, Hawaii, U.S.A. (via Maenggol Sudo and Bungo Suido), 4,323
 Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,385
 Hsia-men, China, 943
 Hu-lu Tao, China, 412
 Iloilo, Philippines, 1,678
 Kobe, Japan, 733
 Krung Thep, Thailand, 2,591
 Kuang-chou, China, 1,277
 Lien-yun, China, 389
 Lo-hsing-ta Mao-ti, China, 818
 Lu-shun, China, 302
 Manila, Philippines, 1,498
 Masan, Korea, 403
 Misumi, Japan, 478
 Moji, Japan, 485
 Mokpo, Korea (via Myondo Suido), 189
 Mokpo, Korea (via south of Kasa Do), 236
 Nagasaki, Japan, 453
 Osaka, Japan, 721
 Petropavlovsk, U.S.S.R. (via La Perouse Strait and Maenggol Sudo), 2,120
 Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,136
 Petropavlovsk, U.S.S.R. (via Osumi Kaikyo), 2,449

 Pohang, Korea, 511
 Pusan, Korea, 402
 Sai Gon, Vietnam, 2,057
 San-men Wan, China, 628
 Shang-hai, China (via Nan Shui-Tao), 503
 Shan-tou, China, 1,052
 Shimonoseki, Japan, 489
 Su-ao Chiang, Taiwan, 823
 Tai-tung Chiang, Taiwan, 937
 Ta-ku, China, 465
 Ta-lien, China, 290
 Tan-shui, Taiwan, 788
 Tasa Do, Korea, 266
 Tso-Ying, Taiwan, 975
 Ulsan, Korea, 435
 Vladivostok, U.S.S.R. (via Malmul Sudo), 911
 Wei-hai-wei, China, 238
 Wonsan, Korea (via Maenggol Sudo), 707
 Yen-tai, China, 273
 Yokohama, Japan (via Maemul Sudo and Bungo Suido), 1,016
 Yokohama, Japan (via Naikai), 1,070
 Yung-chia, China, 723

INHAMBANE, MOZAMBIQUE
 (23°52'00" S., 35°22'42" E.) to:

 Junction Points*
 Cape of Good Hope, Republic of South Africa, 1,228
 Port Said, U.A.R., 4,138

 Ports
 Beira, Mozambique, 259
 East London, Republic of South Africa, 722
 Lourenco Marques, Mozambique, 253
 Quelimane, Mozambique, 377

INISHTRAHULL, IRELAND*
 (55°25'00" N., 7°30'00" W.) to:

 Junction Points*
 Bishop Rock, England, 395
 Cape of Good Hope, Republic of South Africa, 6,141
 Montreal, Canada (track G, via Strait of Belle Isle), 2,545
 Montreal, Canada (tracks C and D, via Cabot Strait), 2,964
 Montreal, Canada (track E, via Cabot Strait), 2,780
 Montreal, Canada (track F, via Cabot Strait), 2,734
 Pentland Firth, Scotland, 272
 Punta Arenas, Chile, 7,315

 Strait of Gibraltar, 1,350
 Straits of Florida (track A), 3,892
 Straits of Florida (track B), 3,875
 Straits of Florida (track C), 3,837
 Yucatan Channel (track A), 4,207
 Yucatan Channel (track B), 4,189
 Yucatan Channel (track C), 4,150

 Ports
 Angmagssalik, Greenland, 1,069
 Ardrossan, Scotland, 95
 Argentia, Canada, 1,874
 Arkhangelsk, U.S.S.R., 1,900
 Baltimore, Maryland, U.S.A., (track A), 3,312
 Baltimore, Maryland, U.S.A., (track B), 3,273
 Baltimore, Maryland, U.S.A., (track C), 3,190
 Barrow in Furness, England, 186
 Belem, Brazil, 3,972
 Belfast, Ireland, 97
 Boston, Massachusetts, U.S.A. (track A), 2,882
 Boston, Massachusetts, U.S.A. (track B), 2,829
 Boston, Massachusetts, U.S.A. (track C), 2,725
 Buenos Aires, Argentina, 6,243
 Cairn Ryan, Scotland, 91
 Castries, St. Lucia, 3,499
 Charleston, South Carolina, U.S.A. (track A), 3,435
 Charleston, South Carolina, U.S.A. (track B), 3,402
 Charleston, South Carolina, U.S.A. (track C), 3,331
 Charlotte Amalie, Virgin Islands, 3,427
 Churchill, Canada (via 75 miles off Kap Farvel), 2,760
 Cienfuegos, Cuba (track A), 4,070
 Cienfuegos, Cuba (track B), 4,063
 Cienfuegos, Cuba (track C), 4,055
 Colon, Panama (via Mona Passage), 4,393
 Colon, Panama (via Windward Passage), 4,362
 Dakar, Senegal, 2,546
 Douglas, Isle of Man, 156
 Dublin, Ireland, 184
 Fleetwood, England, 189
 Freetown, Sierra Leone, 3,024
 Funchal, Madeira Island, 1,466
 Galway, Ireland, 231
 Georgetown, British Guiana, 3,779
 Glasgow, Scotland, 146
 Godhavn, Greenland (direct), 1,901
 Godhavn, Greenland (via 75 miles off Kap Farvel), 1,953
 Goose Bay, Canada, 1,812
 Guantanamo, Cuba (track A), 3,705

*JUNCTION POINT.—See Preface for use of junction points.

Guantanamo, Cuba (track B), 3,697
 Guantanamo, Cuba (track C), 3,690
 Habana, Cuba (track A), 3,898
 Habana, Cuba (track B), 3,881
 Habana, Cuba (track C), 3,843
 Halifax, Canada (track A), 2,570
 Halifax, Canada (track B), 2,512
 Halifax, Canada (tracks C and D), 2,406
 Halifax, Canada (track E), 2,268
 Halifax, Canada (track F), 2,231
 Hamilton, Bermuda (track A), 2,783
 Hamilton, Bermuda (track B), 2,769
 Hamilton, Bermuda (track C), 2,747
 Holyhead, Wales, 181
 Horta, Azores, 1,329
 Ivigtut, Greenland (direct), 1,392
 Ivigtut, Greenland (via 75 miles off Kap Farvel), 1,450
 Jacksonville, Florida, U.S.A., 3,499
 Key West, Florida, U.S.A. (track A), 3,832
 Key West, Florida, U.S.A. (track B), 3,815
 Key West, Florida, U.S.A. (track C), 3,777
 Kingston, Jamaica (track A), 3,868
 Kingston, Jamaica (track B), 3,861
 Kingston, Jamaica (track C), 3,853
 Limerick, Ireland, 279
 Lisboa, Portugal, 1,093
 Liverpool, England, 210
 Miami, Florida, U.S.A. (track A), 3,701
 Miami, Florida, U.S.A. (track B), 3,684
 Miami, Florida, U.S.A. (track C), 3,646
 Milford Haven, Wales, 286
 New Haven, Connecticut, U.S.A., 2,867
 New London, Connecticut, U.S.A. (track A), 2,951
 New London, Connecticut, U.S.A. (track B), 2,909
 New London, Connecticut, U.S.A. (track C), 2,815
 New York, New York, U.S.A. (track A), 3,032
 New York, New York, U.S.A. (track B), 2,990
 New York, New York, U.S.A. (track C), 2,896
 Newport, Wales, 371
 Norfolk, Virginia, U.S.A. (track A), 3,191
 Norfolk, Virginia, U.S.A. (track B), 3,152
 Norfolk, Virginia, U.S.A. (track C), 3,069
 Philadelphia, Pennsylvania, U.S.A. (track A), 3,185

Philadelphia, Pennsylvania, U.S.A. (track B), 3,143
 Philadelphia, Pennsylvania, U.S.A. (track C), 3,049
 Port au Prince, Haiti (track A), 3,739
 Port au Prince, Haiti (track B), 3,732
 Port au Prince, Haiti (track C), 3,724
 Port of Spain, Trinidad, 3,706
 Port Talbot, Wales, 331
 Providence, Rhode Island, U.S.A. (track A), 2,940
 Providence, Rhode Island, U.S.A. (track B), 2,898
 Providence, Rhode Island, U.S.A. (track C), 2,804
 Recife, Brazil, 4,071
 Reykjavik, Iceland, 729
 Rio de Janeiro, Brazil, 5,143
 St. John's, Canada, 1,720
 San Juan, Puerto Rico, 3,436
 Santa Cruz de Tenerife, Canary Islands, 1,704
 Santo Domingo, Dominican Republic, 3,621
 Washington, D.C., U.S.A. (track A), 3,326
 Washington, D.C., U.S.A. (track B), 3,287
 Washington, D.C., U.S.A. (track C), 3,204
 Waterford, Ireland, 276
 Wilmington, North Carolina, U.S.A. (track A), 3,381
 Wilmington, North Carolina, U.S.A. (track B), 3,348
 Wilmington, North Carolina, U.S.A. (track C), 3,275
 Workington, England, 148

INNAMBAN, MOZAMBIQUE. See Inhambane.

INVERGORDON, SCOTLAND
(57°41'00" N., 4°10'00" W.)

Subtract 6 miles from Inverness distances.

INVERNESS, SCOTLAND
(57°29'00" N., 4°14'00" W.) to:

Junction Points*
Skagens Odde, Denmark, 481

Ports
Amsterdam, Netherlands, 482
Antwerpen, Belgium, 554
Bremerhaven, Germany, 514
Dunkerque, France, 526

Emden, Germany, 487
 Esbjerg, Denmark, 455
 Hamburg, Germany, 562
 Oostende, Belgium, 510
 Rotterdam, Netherlands, 496
 Wilhelmshaven, Germany, 508
 Zeebrugge, Belgium, 506

IOKANGA, U.S.S.R.
(68°03'00" N., 39°35'00" E.) to:

Junction Points*
Pentland Firth, Scotland, 1,424
Skagens Odde, Denmark, 1,517

Ports
Arkhangelsk, U.S.S.R., 271
Dikson Harbor, U.S.S.R., 899
Reykjavik, Iceland, 1,646

IPSWICH, ENGLAND
(52°03'00" N., 1°10'00" E.)

Add 8 miles to Harwich distances.

IQUIQUE, CHILE
(20°12'00" S., 70°10'00" W.) to:

Junction Points*
Panama, Panama, 1,987
Punta Arenas, Chile, 2,201

Ports
Acapulco, Mexico, 2,834
Amapala, Honduras, 2,303
Antofagasta, Chile, 224
Arica, Chile, 110
Brito, Nicaragua, 2,189
Caldera, Chile, 420
Callao, Peru, 659
Coquimbo, Chile, 602
Corinto, Nicaragua, 2,247
Corral, Chile, 1,205
Esmeraldas, Ecuador, 1,550
Guayaquil, Ecuador, 1,317
Guaymas, Mexico, 3,750
Lota, Chile, 1,033
Mollendo, Peru, 220
Monterey, California, U.S.A., 4,540
Pisco, Peru, 560
Puntarenas, Costa Rica, 2,062
Salina Cruz, Mexico, 2,645
San Blas, Mexico, 3,294
San Diego, California, U.S.A., 4,218
San Francisco, California, U.S.A., 4,620
San Jose, Guatemala, 2,404
Talahuan, Chile, 1,008
Valparaiso, Chile, 782
Yokohama, Japan, 9,026

*JUNCTION POINT.—See Preface for use of junction points.

IRAKLION, CRETE

(35°20'41'' N., 25°08'24'' E.) to:

Junction Points*

Port Said, U.A.R., 455

Strait of Gibraltar, 1,516

Ports

Al Ladhiqiyah, Syria, 527

Alexandria, U.A.R., 372

Alger, Algeria, 1,087

Alicante, Spain, 1,254

Ancona, Italy, 762

Annaba, Algeria, 863

Banghazi, Libya, 370

Barcelona, Spain, 1,186

Bari, Italy, 554

Batumi, U.S.S.R., 1,032

Bayrut, Lebanon, 526

Bizerte, Tunisia, 758

Brindisi, Italy, 496

Cartagena, Spain, 1,279

Ceuta, Morocco, 1,496

Genova, Italy, 991

Gibraltar, 1,499

Haifa, Israel, 522

Istanbul, Turkey, 445

Izmir, Turkey, 262

Kalamai, Greece, 197

Khalkis, Greece, 210

Kyrenia, Cyprus, 406

La Spezia, Italy, 956

Limassol, Cyprus, 405

Limn Khion, Greece, 193

Livorno, Italy, 920

Malaga, Spain, 1,446

Marseille, France, 1,083

Matruh, U.A.R., 308

Messina, Sicily, 510

Napoli, Italy, 681

Navplion, Greece, 237

Odessa, U.S.S.R., 793

Oran, Algeria, 1,284

Palermo, Sicily, 626

Palma, Balearic Islands, 1,130

Paphos, Cyprus, 363

Piraeus, Greece, 175

Rijeka, Yugoslavia, 831

Rodhos, Rodhos, 171

Salamis, Greece, 190

Savona, Italy, 1,002

Sibenik, Yugoslavia, 704

Siracusa, Sicily, 495

Split, Yugoslavia, 689

Tarabulus, Libya, 630

Taranto, Italy, 509

Thessaloniki, Greece, 351

Toulon, France, 1,051

Trieste, Free Territory, 865

Tunis, Tunisia, 745

Valencia, Spain, 1,252

Valletta, Malta, 528

Venezia, Italy, 872

Volos, Greece, 292

Yumurtalik, Turkey, 540

ISABELA, CUBA

(22°57'00'' N., 80°00'24'' W.) to:

Junction Points*

Straits of Florida, 195

Yucatan Channel, 329

Ports

Habana, Cuba, 151

Jacksonville, Florida, U.S.A., 507

Nuevitas, Cuba, 212

ISABEL SEGUNDA, ISLA DE VIEQUES, PUERTO RICO

(18°10'00'' N., 65°28'00'' W.) to:

Junction Points*

Panama, Panama, 1,060

Straits of Florida, 1,064

Ports

New York, New York, U.S.A., 1,430

Port of Spain, Trinidad, 531

Willemstad, Curacao, 446

ISKENDERUN, TURKEY

(36°36'00'' N., 36°11'00'' E.) to:

Junction Points*

Port Said, U.A.R., 381

Strait of Gibraltar, 2,054

Ports

Bayrut, Lebanon, 180

Constanta, Rumania, 1,044

Istanbul, Turkey, 847

Izmir, Turkey, 652

Nice, France, 1,553

Patrai, Greece (via Corinth Canal), 748

Patrai, Greece (south of Greece), 846

Piraeus, Greece, 656

Pula, Yugoslavia (via Corinth Canal), 1,301

Pula, Yugoslavia (south of Greece), 1,341

Rostov-na-Donu, U.S.S.R., 1,483

Sete, France, 1,675

Sfax, Tunisia, 1,282

Sur, Lebanon, 218

Tarabulus, Libya, 1,167

Thessaloniki, Greece, 784

Tubruq, Libya, 667

ISLA DE PASCUA, SOUTH PACIFIC

(27°08'30'' S., 109°26'30'' W.) to:

Junction Points*

Panama, Panama, 2,785

Ports

Archipelago de Colon, 1,947

Islas Juan Fernandez, 1,633

ISLAS JUAN FERNANDEZ, SOUTH PACIFIC

(33°38'00'' S., 78°49'40'' W.) to:

Ports

Honolulu, Hawaii, U.S.A., 5,595

Isla de Pascua, 1,633

Puerto Montt, Chile, 616

Valparaiso, Chile, 364

ISTANBUL, TURKEY

(41°01'15'' N., 28°59'09'' E.) to:

Junction Points*

Port Said, U.A.R., 804

Strait of Gibraltar (via Corinth Canal), 1,804

Strait of Gibraltar (south of Greece), 1,821

Ports

Alexandria, U.A.R., 742

Alexandroupolis, Greece, 200

Alger, Algeria (via Corinth Canal), 1,376

Alger, Algeria (south of Greece), 1,393

Alicante, Spain (via Corinth Canal), 1,540

Alicante, Spain (south of Greece), 1,560

Almeria, Spain (via Corinth Canal), 1,642

Almeria, Spain (south of Greece), 1,659

Ancona, Italy (via Corinth Canal), 962

Ancona, Italy (south of Greece), 1,058

Annaba, Algeria (via Corinth Canal), 1,151

Annaba, Algeria (south of Greece), 1,168

Banghazi, Libya, 716

Barcelona, Spain (via Corinth Canal), 1,445

Barcelona, Spain (south of Greece), 1,486

Bari, Italy (via Corinth Canal), 755

Bari, Italy (south of Greece), 851

Batumi, U.S.S.R., 591

Bayrut, Lebanon, 896

*JUNCTION POINT.—See Preface for use of junction points.

Bizerte, Tunisia (via Corinth Canal), 1,046	Napoli, Italy (via Corinth Canal), 940	Valencia, Spain (south of Greece), 1,558
Bizerte, Tunisia (south of Greece), 1,063	Napoli, Italy (south of Greece), 981	Valletta, Malta, 837
Brindisi, Italy (via Corinth Canal), 697	Nice, France (via Corinth Canal), 1,279	Venezia, Italy (via Corinth Canal), 1,073
Brindisi, Italy (south of Greece), 793	Nice, France (south of Greece), 1,321	Venezia, Italy (south of Greece), 1,169
Cagliari, Sardinia (via Corinth Canal), 1,092	Novorossiysk, U.S.S.R., 460	Volos, Greece, 329
Cagliari, Sardinia (south of Greece), 1,133	Odessa, U.S.S.R., 352	
Cartagena, Spain (via Corinth Canal), 1,567	Oran, Algeria (via Corinth Canal), 1,573	
Cartagena, Spain (south of Greece), 1,573	Oran, Algeria (south of Greece), 1,590	
Castellamare di Stabia, Italy (via Corinth Canal), 937	Palermo, Sicily (via Corinth Canal), 884	
Castellamare di Stabia, Italy (south of Greece), 979	Palermo, Sicily (south of Greece), 926	
Catania, Sicily (via Corinth Canal), 776	Palma, Balearic Islands (via Corinth Canal), 1,403	
Catania, Sicily (south of Greece), 810	Palma, Balearic Islands (south of Greece), 1,446	
Ceuta, Morocco (via Corinth Canal), 1,785	Piraeus, Greece, 364	
Ceuta, Morocco (south of Greece), 1,802	Pula, Yugoslavia, 1,124	
Civitavecchia, Italy (via Corinth Canal), 1,066	Rijeka, Yugoslavia (via Corinth Canal), 1,029	
Civitavecchia, Italy (south of Greece), 1,107	Rijeka, Yugoslavia (south of Greece), 1,128	
Constanta, Rumania, 201	Rodhos, Rodhos, 445	
Dikili, Turkey, 285	Rostov-na-Donu, U.S.S.R., 640	
Genova, Italy (via Corinth Canal), 1,250	Savona, Italy (via Corinth Canal), 1,260	
Genova, Italy (south of Greece), 1,291	Savona, Italy (south of Greece), 1,301	
Gibraltar (via Corinth Canal), 1,787	Sete, France (via Corinth Canal), 1,401	
Gibraltar (south of Greece), 1,804	Sete, France (south of Greece), 1,442	
Haifa, Israel, 849	Sevastopol, U.S.S.R., 305	
Iraklion, Crete, 445	Sibenik, Yugoslavia (via Corinth Canal), 902	
Iskenderun, Turkey, 847	Sibenik, Yugoslavia (south of Greece), 1,001	
Izmir, Turkey, 292	Siracusa, Sicily (via Corinth Canal), 772	
Kerch, U.S.S.R., 439	Siracusa, Sicily (south of Greece), 798	
La Spezia, Italy (via Corinth Canal), 1,214	Split, Yugoslavia (via Corinth Canal), 887	
La Spezia, Italy (south of Greece), 1,256	Split, Yugoslavia (south of Greece), 986	
Larnaca, Cyprus, 766	Tarabulus, Libya, 453	
Livorno, Italy (via Corinth Canal), 1,178	Taranto, Italy (via Corinth Canal), 717	
Livorno, Italy (south of Greece), 1,220	Taranto, Italy (south of Greece), 806	
Malaga, Spain (via Corinth Canal), 1,735	Thessaloniki, Greece, 338	
Malaga, Spain (south of Greece), 1,752	Toulon, France (via Corinth Canal), 1,310	
Marseille, France (via Corinth Canal), 1,342	Toulon, France (south of Greece), 1,351	
Marseille, France (south of Greece), 1,383	Trieste, Free Territory (via Corinth Canal), 1,063	
Mersin, Turkey, 789	Trieste, Free Territory (south of Greece), 1,162	
Messina, Sicily (via Corinth Canal), 768	Tunis, Tunisia (via Corinth Canal), 1,033	
Messina, Sicily (south of Greece), 810	Tunis, Tunisia (south of Greece), 1,050	
	Valencia, Spain (via Corinth Canal), 1,528	

ITOUZAKI, JAPAN

(34°23'00" N., 133°06'00" E.) to:

Ports

Kobe, Japan, 113
 Kure, Japan, 73
 Sasebo, Japan, 271
 Shimonoseki, Japan, 133
 Shiogama, Japan, 662
 Yokohama, Japan, 446

IVIGTUT, GREENLAND

(61°12'30" N., 48°10'00" W.) to:

Junction Points*

Bishop Rock, England (direct), 1,608
 Bishop Rock, England (via 75 miles off Kap Farvel), 1,652
 Inishtrahull, Ireland (direct), 1,392
 Inishtrahull, Ireland (via 75 miles off Kap Farvel), 1,450
 Montreal, Canada, 1,472
 Pentland Firth, Scotland (direct), 1,440
 Pentland Firth, Scotland (via 75 miles off Kap Farvel), 1,510
 Strait of Gibraltar (direct), 2,283
 Strait of Gibraltar (via 75 miles off Kap Farvel), 2,304
 Straits of Florida, 2,925

Ports

Angmagssalik, Greenland (direct), 624
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 754
 Argentia, Canada, 1,023
 Arkhangelsk, U.S.S.R. (direct), 2,573
 Arkhangelsk, U.S.S.R. (via 75 miles off Kap Farvel), 2,683
 Boston, Massachusetts, U.S.A., 1,731
 Colon, Panama, 3,536
 Godhavn, Greenland, 560
 Guantanamo, Cuba, 2,873
 Halifax, Canada, 1,380
 Murmansk, U.S.S.R. (direct), 2,201
 Murmansk, U.S.S.R. (via 75 miles off Kap Farvel), 2,310
 New York, New York, U.S.A., 1,933
 Norfolk, Virginia, U.S.A., 2,116
 Philadelphia, Pennsylvania, U.S.A., 2,086

*JUNCTION POINT.—See Preface for use of junction points.

Portsmouth, New Hampshire, U.S.A., 1,709
 Reykjavik, Iceland (direct), 887
 Reykjavik, Iceland (via 75 miles off Kap Farvel), 980
 St. John's, Canada, 849
 San Juan, Puerto Rico, 2,720

IWAKUNI, JAPAN

(34°10'00" N., 132°17'00" E.) to:

Ports
 Apra, Guam, 1,437
 Kobe, Japan, 166
 Sai Gon, Vietnam, 2,108
 Shimonoseki, Japan, 93
 Yokohama, Japan, 497

IZMIR, TURKEY

(38°25'39" N., 27°07'58" E.) to:

Junction Points*
 Port Said, U.A.R., 608
 Strait of Gibraltar (via Corinth Canal), 1,650
 Strait of Gibraltar (south of Greece), 1,667

Ports
 Alexandria, U.A.R., 547
 Alger, Algeria (via Corinth Canal), 1,221
 Alger, Algeria (south of Greece), 1,238
 Alicante, Spain (via Corinth Canal), 1,386
 Alicante, Spain (south of Greece), 1,405
 Al Mina Al Bayda, Syria, 626
 Ancona, Italy (via Corinth Canal), 808
 Ancona, Italy (south of Greece), 904
 Annaba, Algeria (via Corinth Canal), 997
 Annaba, Algeria (south of Greece), 1,014
 Ashdod Yam, Israel, 668
 Banghazi, Libya, 561
 Barcelona, Spain (via Corinth Canal), 1,290
 Barcelona, Spain (south of Greece), 1,332
 Bari, Italy (via Corinth Canal), 601
 Bari, Italy (south of Greece), 697
 Batumi, U.S.S.R., 880
 Bayrut, Lebanon, 651
 Bizerte, Tunisia (via Corinth Canal), 892
 Bizerte, Tunisia (south of Greece), 909

Brindisi, Italy (via Corinth Canal), 543
 Brindisi, Italy (south of Greece), 639
 Cartagena, Spain (via Corinth Canal), 1,413
 Cartagena, Spain (south of Greece), 1,430
 Ceuta, Morocco (via Corinth Canal), 1,630
 Ceuta, Morocco (south of Greece), 1,648
 Darnah, Libya, 465
 Dikili, Turkey, 63
 Ermoupolis, Greece, 158
 Gallipoli, Italy (south of Greece), 606
 Genova, Italy (via Corinth Canal), 1,095
 Genova, Italy (south of Greece), 1,137
 Gibraltar (via Corinth Canal), 1,633
 Gibraltar (south of Greece), 1,650
 Haifa, Israel, 654
 Iraklion, Crete, 262
 Iskenderun, Turkey, 652
 Istanbul, Turkey, 292
 Kavala, Greece, 209
 Khalkis, Greece, 210
 Khandia, Crete, 276
 Kyrenia, Cyprus, 524
 La Spezia, Italy (via Corinth Canal), 1,060
 La Spezia, Italy (south of Greece), 1,101
 Larnaca, Cyprus, 570
 Limassol, Cyprus, 530
 Livorno, Italy (via Corinth Canal), 1,024
 Livorno, Italy (south of Greece), 1,066
 Malaga, Spain (via Corinth Canal), 1,580
 Malaga, Spain (south of Greece), 1,597
 Marseille, France (via Corinth Canal), 1,187
 Marseille, France (south of Greece), 1,229
 Mersin, Turkey, 594
 Messina, Sicily (via Corinth Canal), 614
 Messina, Sicily (south of Greece), 655
 Mitilini, Greece, 60
 Napoli, Italy (via Corinth Canal), 785
 Napoli, Italy (south of Greece), 827
 Navplion, Greece, 258
 Odessa, U.S.S.R., 640
 Oran, Algeria (via Corinth Canal), 1,418
 Oran, Algeria (south of Greece), 1,436
 Palermo, Sicily (via Corinth Canal), 730

Palermo, Sicily (south of Greece), 772
 Palma, Balearic Islands (via Corinth Canal), 1,248
 Palma, Balearic Islands (south of Greece), 1,290
 Piraeus, Greece, 210
 Rethimnon, Crete, 277
 Rijeka, Yugoslavia (via Corinth Canal), 875
 Rijeka, Yugoslavia (south of Greece), 974
 Rodhos, Rodhos, 256
 Salamis, Greece, 225
 Savona, Italy (via Corinth Canal), 1,106
 Savona, Italy (south of Greece), 1,147
 Sevastopol, U.S.S.R., 594
 Sibenik, Yugoslavia (via Corinth Canal), 747
 Sibenik, Yugoslavia (south of Greece), 846
 Siracusa, Sicily (via Corinth Canal), 618
 Siracusa, Sicily (south of Greece), 644
 Soudha, Crete, 281
 Split, Yugoslavia (via Corinth Canal), 732
 Split, Yugoslavia (south of Greece), 831
 Tarabulus, Libya, 799
 Taranto, Italy (via Corinth Canal), 563
 Taranto, Italy (south of Greece), 652
 Thessaloniki, Greece, 259
 Toulon, France (via Corinth Canal), 1,155
 Toulon, France (south of Greece), 1,197
 Trieste, Free Territory (via Corinth Canal), 908
 Trieste, Free Territory (south of Greece), 1,007
 Tunis, Tunisia (via Corinth Canal), 879
 Tunis, Tunisia (south of Greece), 896
 Valencia, Spain (via Corinth Canal), 1,374
 Valencia, Spain (south of Greece), 1,403
 Valletta, Malta, 683
 Venezia, Italy (via Corinth Canal), 919
 Venezia, Italy (south of Greece), 1,015
 Volos, Greece, 226
 Yumurtalik, Turkey, 639

JACKSONVILLE, FLORIDA, U.S.A.
 (30°19'00" N., 81°39'00" W.) to:

*JUNCTION POINT.—See Preface for use of junction points.

<p>Junction Points* Bishop Rock, England (track A), 3,595 Bishop Rock, England (track B), 3,571 Bishop Rock, England (track C), 3,527 Cape of Good Hope, Republic of South Africa, 6,862 Fastnet, Ireland (track A), 3,499 Fastnet, Ireland (track B), 3,470 Fastnet, Ireland (track C), 3,413 Inishtrahull, Ireland (track A), 3,625 Inishtrahull, Ireland (track B), 3,589 Inishtrahull, Ireland (track C), 3,511 Montreal, Canada, 2,119 Panama, Panama, 1,559 Pentland Firth, Scotland (track A), 3,839 Pentland Firth, Scotland (track B), 3,793 Pentland Firth, Scotland (track C), 3,691 Punta Arenas, Chile, 6,917 Strait of Gibraltar (direct), 3,740 Straits of Florida, 523</p> <p>Ports Belem, Brazil, 2,773 Belize, British Honduras, 1,047 Bridgetown, Barbados, 1,617 Buenos Aires, Argentina, 5,841 Caibarien, Cuba, 526 Cape Town, Republic of South Africa, 6,854 Cartagena, Colombia, 1,395 Castries, St. Lucia, 1,520 Charlotte Amalie, Virgin Islands, 1,181 Colon, Panama (via Crooked Island Passage and Windward Passage), 1,516 Colon, Panama (via Yucatan Channel), 1,535 Dakar, Senegal, 3,650 Elizabeth Harbor, Bahamas, 559 Georgetown, British Guiana, 1,980 Guantanamo, Cuba (via Crooked Island Passage), 851 Habana, Cuba, 528 Halifax, Canada, 1,255 Hopetown, Bahamas, 358 Isabela, Cuba, 507 Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,016 Las Palmas de Gran Canaria, Canary Islands, 3,467 Limon, Costa Rica, 1,589 Lisboa, Portugal, 3,548 Miller Anchorage, Bahamas, 507 Montevideo, Uruguay, 5,727 Nassau, Bahamas, 456 Ponce, Puerto, 1,146 Port of Spain, Trinidad, 1,685</p>	<p>Recife, Brazil, 3,668 Rio de Janeiro, Brazil, 4,740 San Juan, Puerto Rico, 1,121 Santo Domingo, Dominican Republic, 1,166 Santiago de Cuba, Cuba (via Crooked Island Passage, and Windward Passage), 904 Tampico, Mexico, 1,361</p> <p>JACMEL, HAITI (18°13'20" N., 72°31'00" W.) to:</p> <p>Junction Points* Panama, Panama, 1,461 Straits of Florida, 802</p> <p>Ports Baltimore, Maryland, U.S.A., 1,416 Boston, Massachusetts, U.S.A., 1,672 Colon, Panama, 683 Jeremie, Haiti, 176 New York, New York, U.S.A., 1,489 Philadelphia, Pennsylvania, U.S.A., 1,461 Port au Prince, Haiti, 271</p> <p>JAFFA, ISRAEL (32°03'24" N., 34°44'48" E.) to:</p> <p>Junction Points* Port Said, U.A.R., 135 Strait of Gibraltar, 2,030</p> <p>Ports Constanta, Rumania, 1,057 Kerch, U.S.S.R., 1,295 Larnaca, Cyprus, 181 Mersin, Turkey, 285 Nice, France, 1,541 Patrai, Greece (via Corinth Canal), 752 Patrai, Greece (south of Greece), 837 Pula, Yugoslavia (via Corinth Canal), 1,306 Pula, Yugoslavia (south of Greece), 1,331 Rostov-na-Donu, U.S.S.R., 1,496 Sete, France, 1,662 Valletta, Malta, 1,037</p> <p>JAKOBHAVN, GREENLAND (69°13'30" N., 51°05'30" W.) to:</p> <p>Junction Points* Pentland Firth, Scotland, 1,972 Strait of Gibraltar, 2,819</p>	<p>Ports Churchill, Canada, 1,532 Reykjavik, Iceland, 1,418 St. John's, Canada, 1,341</p> <p>JAKOBSTAD, FINLAND (63°43'00" N., 22°41'30" E.) to:</p> <p>Ports Oulu, Finland, 133 Vaasa, Finland, 99</p> <p>JALUIT, MARSHALL ISLANDS (5°55'00" N., 169°38'30" E.) to:</p> <p>Junction Points* Panama, Panama, 6,666 Punta Arenas, Chile, 6,815</p> <p>Ports Auckland, New Zealand (via South-east Pass), 2,595 Brisbane, Australia (via Main and Howe Channels), 2,231 Callao, Peru, 6,832 Funafuti, Ellice Islands, 1,041 Hakodate, Japan, 2,670 Hobart, Tasmania (via Southeast Pass), 3,223 Hong Kong, B.C.C. (via Southeast Pass), 3,370 Honolulu, Hawaii, U.S.A., 2,096 Melbourne, Australia (via South Channel), 3,181 Midway Island, 1,535 Nagasaki, Japan (via Osumi Kaikyo), 2,808 Pago Pago, American Samoa, 1,700 Pearl Harbor, Hawaii, U.S.A., 2,101 Petropavlovsk, U.S.S.R., 2,883 Ponape, Caroline Islands, 698 Saipan, Mariana Islands, 1,545 San Francisco, California, U.S.A., 4,150 Seattle, Washington, U.S.A., 4,296 Shang-hai, China (via Southeast Pass), 3,138 Sydney, Australia (via Southeast Pass), 2,623 Tinian, Mariana Islands, 1,536 Truk, Caroline Islands, 1,078 Valparaiso, Chile, 7,034 Wake Island, 831 Yokohama, Japan (via Southeast Pass), 2,442</p> <p>JAMES BAY, SOUTH ATLANTIC. See St. Helena Island.</p>
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*JUNCTION POINT.—See Preface for use of junction points.

JAN MAYEN, GREENLAND SEA
(70°57'00" N., 8°31'00" W.) to:

Ports

Bjornoya, Svalbard, 544
Reykjavik, Iceland, 617
Tromso, Norway, 567

JARVIS ISLAND, SOUTH PACIFIC
(0°22'30" S., 160°01'45" W.) to:

Junction Points*

Panama, Panama, 4,804

Ports

Christmas Island, North Pacific, 209
Johnston Island, North Pacific, 1,173
Pago Pago, American Samoa, 1,050

JAZIREH-YE KHARK, IRAN
(29°14'00" N., 50°21'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,018
Port Said, U.A.R., 3,200
Singapore, 3,739

Ports

Aden, Aden Protectorate, 1,811
Bombay, India, 1,431

JEREMIE, HAITI
(18°39'00" N., 74°06'30" W.) to:

Junction Points*

Panama, Panama, 713

Ports

Jacmel, Haiti, 176
Miragoane, Haiti, 63
Port au Prince, Haiti, 100
Santo Domingo, Dominican Republic, 343

JERSEY CITY, NEW JERSEY, U.S.A.
(40°43'00" N., 74°02'00" W.)

For ocean distances, add 1½ miles to
New York distances.

JESSELTON, NORTH BORNEO
(5°59'30" N., 116°04'35" E.) to:

Junction Points*

Singapore, 832
Torres Strait, Australia, 2,041

Ports
Djakarta, Indonesia, 999
Iloilo, Philippines, 501
Zamboanga, Philippines, 412

JIBUTI, FRENCH SOMALILAND.
See Djibouti.

JIDDA, SAUDI ARABIA. See
Juddah.

JINSEN, KOREA. See Inchon.

JOHNSTON ISLAND, NORTH
PACIFIC
(16°45'00" N., 169°30'30" W.) to:

Junction Points*
Panama, Panama, 5,359

Ports
Apia, Samoa, 1,838
Apra, Guam, 2,665
Christmas Island, 1,137
Fanning Island, 1,032
Funafuti, Ellice Island, 1,654
Honolulu, Hawaii, U.S.A., 717
Jarvis Island, 1,173
Kahului, Hawaii, U.S.A., 798
Midway Island, 821
Palmyra Island, 783
Papeete, Society Islands, 2,371
San Francisco, California, U.S.A., 2,779
Seattle, Washington, U.S.A., 3,018

JOHORE BAHRU, MALAYA,
MALAYSIA
(1°27'00" N., 103°46'00" E.) to:

Junction Points*
Singapore, 31

Ports
Calcutta, India, 1,652
Colombo, Ceylon, 1,584
Madras, India, 1,586
Port Swettenham, Malaysia, 206

JOLO, PHILIPPINES
(6°03'30" N., 120°59'45" E.) to:

Ports
Batangas, Philippines, 480
Manila, Philippines (via Apo West Pass), 550

Sandakan, North Borneo, 180
Tacloban, Philippines, 442
Zamboanga, Philippines, 85

JUAN FERNANDEZ ISLAND,
SOUTH PACIFIC. See Islas Juan
Fernandez.

JUDDAH, SAUDI ARABIA
(21°28'00" N., 39°09'20" E.) to:

Junction Points*
Port Said, U.A.R., 722

Ports
Aden, Aden Protectorate, 707
Al Aqabah, Jordan, 573
Massaua, Ethiopia, 364
Port Sudan, Sudan, 161

JULIANEHAAB, GREENLAND
(60°43'00" N., 46°02'30" W.) to:

Junction Points*
Montreal, Canada (via Strait of
Belle Isle), 1,470

Ports
Angmagssalik, Greenland (direct), 531
Angmagssalik (via 75 miles off Kap Farvel), 665
New York, New York, U.S.A., 1,911
Reykjavik, Iceland (direct), 795
Reykjavik, Iceland (via 75 miles off Kap Farvel), 892
St. John's, Canada, 827

JUNEAU, ALASKA, U.S.A.
(58°17'45" N., 134°25'00" W.) to:

Ports
Dutch Harbor, Alaska, U.S.A., 1,136
Kodiak, Alaska, U.S.A., 610
Prince Rupert, Canada, 322
San Francisco, California, U.S.A., 1,371
Seattle, Washington, U.S.A., 873
Vancouver, Canada, 761

KABINDA. See Cabinda.

KAGOSHIMA, JAPAN
(31°35'30" N., 130°33'50" E.) to:

Ports
Hakodate, Japan, 946

*JUNCTION POINT.—See Preface for use of junction points.

Kamaishi, Japan, 875
 Kobe, Japan (via Tomogashima Suido), 379
 Kobe, Japan (via Bungo Suido), 422
 Komatsushima, Japan, 344
 Kure, Japan, 296
 Macau, China, 1,114
 Misumi, Japan, 184
 Nagasaki, Japan, 168
 Niihama, Japan, 318
 Shimizu, Shikoku, Japan, 208
 Shimonoseki, Japan (west of Kyushu), 306
 Shimonoseki, Japan (via Bungo Suido), 295
 Tokuyama, Japan, 263
 Ube, Japan, 280
 Yokkaichi, Japan, 476
 Yokohama, Japan, 594

KAHULUI, MAUI, HAWAII, U.S.A.
 (20°54'00'' N., 156°28'31'' W.) to:

Junction Points*
 Panama, Panama, 4,605

Ports
 Johnston Island, 798
 Midway Island, 1,266
 Palmyra Island, 1,010
 Seattle, Washington, U.S.A., 2,364
 Yokohama, Japan, 3,496

KAKUMABETSU, KURIL ISLANDS.
 See Shelekhovo.

KALAMAI, GREECE
 (37°01'02'' N., 22°06'38'' E.) to:

Junction Points*
 Port Said, U.A.R., 644
 Strait of Gibraltar, 1,370

Ports
 Banghazi, Libya, 313
 Iraklion, Crete, 197
 Messina, Sicily, 355
 Taranto, Italy, 351
 Tunis, Tunisia, 599

KALAMATA, GREECE. See Kalamai.

KALAMON, GREECE. See Kalamai.

KALINIGRAD, U.S.S.R.
 (54°42'30'' N., 20°28'00'' E.)

Add 21½ miles to Baltiysk distances.

KALMAR, SWEDEN
 (56°39'45'' N., 16°22'30'' E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 289
 Skagens Odde (via Store Baelt), 470
 Skagens Odde (via The Sound), 342

Ports
 Oslo, Norway (via Store Baelt), 596
 Oslo, Norway (via The Sound), 464

KALPOS SOUDHAS, CRETE. See
 Soudha, Ormos Soudhas.

KALUNDBORG, DENMARK
 (55°40'07'' N., 11°05'00'' E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 111
 Skagens Odde, Denmark, 141

Ports
 Kobenhavn, Denmark, 115
 Stockholm, Sweden, 531
 Swinoujscie, Poland, 175

KAMAISHI, JAPAN
 (39°16'18'' N., 141°53'36'' E.) to:

Ports
 Hakodate, Japan, 192
 Kagoshima, Japan, 875
 Kobe, Japan, 631
 Nagasaki, Japan, 972
 Yokohama, Japan, 348

KANDALAKSHA, U.S.S.R.
 (67°08'00'' N., 33°24'00'' E.)

Add 101 miles to Arkhangelsk distances.

KANDLA, INDIA
 (23°02'00'' N., 70°13'30'' E.)

Add 76½ miles to Okha distances.

KANEOHE BAY, HAWAII, U.S.A.
 (21°26'23'' N., 157°47'00'' W.) to:

Junction Points*
 Panama, Panama, 4,686

Ports
 Apra, Guam, 3,354

Seattle, Washington, U.S.A., 2,388
 Yokohama, Japan, 3,406

KAOE BAY, HALMAHERA. See
 Teluk Kau.

KAO-HSIUNG CHIANG, TAIWAN
 (22°37'00'' N., 120°16'00'' E.) to:

Ports
 Chang-Kan, China, 811
 Macau, China, 329
 Nha Trang Bay, Vietnam, 895
 San Fernando, Philippines, 356
 San-ya Chiang, China, 682
 Vinh Cam Ranh, Vietnam, 915
 Yu-lin Chiang, China, 674

KARACHI, PAKISTAN
 (24°49'00'' N., 66°58'20'' E.) to:

Junction Points*
 Cape Leeuwin, Australia, 4,512
 Cape of Good Hope, Republic of South Africa, 4,658
 Port Said, U.A.R., 2,865
 Singapore, 2,882
 Torres Strait, Australia (south of Java and Timor), 5,298

Ports
 Aden, Aden Protectorate, 1,472
 Al Basrah, Iraq, 1,177
 Bandar Abbas, Iran, 643
 Belawan, Indonesia, 2,550
 Bhavnagar, India, 481
 Bombay, India, 504
 Calcutta, India, 2,578
 Cochin, India, 1,044
 Colombo, Ceylon, 1,344
 Darwin, Australia (south of Java and Timor Islands), 4,624
 Durban, Republic of South Africa, 3,887
 Fremantle, Australia, 4,437
 Galle, Ceylon, 1,393
 Madras, India, 1,908
 Malacca, Malaysia, 2,768
 Masqat, Mascot and Oman, 468
 Massaua, Ethiopia, 1,865
 Mombasa, Kenya, 2,361
 Mormugao, India, 690
 Okha, India, 194
 Penang, Malaysia, 2,595
 Rangoon, Burma, 2,561
 Sabang, Indonesia, 2,284
 Tamatave, Malagasy Republic, 2,788
 Trincomalee, Ceylon, 1,667

*JUNCTION POINT.—See Preface for use of junction points.

KARDELJEVO, YUGOSLAVIA. See Ploce.

KARLSKRONA, SWEDEN
(56°10'00" N., 15°36'00" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 235
Skagens Odde, Denmark, 295

Ports
Kobenhavn, Denmark, 148
Leningrad, U.S.S.R., 563
Stockholm, Sweden, 290

KASATKA, JAPAN
(45°00'00" N., 147°44'00" E.) to:

Ports
Aleksandrovsk, Sakhalin, U.S.S.R., 595
Aomori, Japan, 441
Attu Island, Alaska, U.S.A., 1,106
Dutch Harbor, Alaska, U.S.A., 1,846
Hakodate, Japan, 407
Kholmsk, Sakhalin, U.S.S.R., 368
Kiska, Alaska, U.S.A., 1,274
Korsakov, Sakhalin, U.S.S.R., 285
Muroran, Japan, 401
Nemuro, Japan, 139
Nikolayevsk, U.S.S.R. (south of Sakhalin), 747
Otaru, Japan, 441
Petropavlovsk, U.S.S.R., 690
Vladivostok, U.S.S.R., 779
Wakkanai, Japan, 310
Zaliv Chikhacheva, U.S.S.R., 632

KAUNAKAKAI, HAWAII, U.S.A.
(21°05'00" N., 157°02'00" W.) to:

Junction Points*
Panama, Panama, 4,633

Ports
Midway Island, 1,220
Seattle, Washington, U.S.A., 2,398
Yokohama, Japan, 3,454

KAVALA, GREECE
(40°55'50" N., 24°24'11" E.) to:

Junction Points*
Port Said, U.A.R., 714
Strait of Gibraltar (via Corinth Canal), 1,689
Strait of Gibraltar (south of Greece), 1,706

Ports
Alger, Algeria (via Corinth Canal), 1,260
Alger, Algeria (south of Greece), 1,277
Bayrut, Lebanon, 756
Izmir, Turkey, 209
Piraeus, Greece, 249
Siracusa, Sicily (via Corinth Canal), 656
Siracusa, Sicily (south of Greece), 682
Thessaloniki, Greece, 160
Volos, Greece, 162

KAWASAKI, JAPAN
(35°30'00" N., 139°45'00" E.)

Use Yokohama distances.

KEFLAVIK, ICELAND
(64°25'00" N., 22°33'25" W.) to:

Junction Points*
Pentland Firth, Scotland, 671
Strait of Gibraltar, 1,947

Ports
Bergen, Norway, 875
Murmansk, U.S.S.R., 1,521
St. John's, Canada, 1,404

KENITRA, MOROCCO
(34°16'13" N., 6°35'00" W.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 5,056
Ushant, France, 954

Ports
Dakar, Senegal, 1,432
Tangier, Morocco, 115

KERCH, U.S.S.R.
(45°21'16" N., 36°28'40" E.) to:

Junction Points*
Port Said, U.A.R., 1,238
Strait of Gibraltar (via Corinth Canal), 2,239
Strait of Gibraltar (south of Greece), 2,256

Ports
Almeria, Spain (via Corinth Canal), 2,077

Almeria, Spain (south of Spain), 2,094
Constanta, Rumania, 370
Istanbul, Turkey, 439
Jaffa, Israel, 1,295
Mersin, Turkey, 1,214
Nice, France (via Corinth Canal), 1,714
Nice, France (south of Greece), 1,756
Patrai, Greece (via Corinth Canal), 890
Patrai, Greece (south of Greece), 1,049
Pula, Yugoslavia (via Corinth Canal), 1,444
Pula, Yugoslavia (south of Greece), 1,543
Rostov-na-Donu, U.S.S.R., 208
Sete, France (via Corinth Canal), 1,836
Sete, France (south of Greece), 1,877

KERET, U.S.S.R.
(66°17'00" N., 33°35'00" E.)

Add 54 miles to Arkhangelsk distances.

KERKIRA, GREECE
(39°37'45" N., 19°54'35" E.) to:

Junction Points*
Port Said, U.A.R., (via Corinth Canal), 826
Port Said, U.A.R. (south of Greece), 845
Strait of Gibraltar, 1,324

Ports
Brindisi, Italy, 123
Catania, Sicily, 290
Dubrovnik, Yugoslavia, 208
Patrai, Greece, 138
Taranto, Italy, 167

KETCHIKAN, ALASKA, U.S.A.
(55°20'30" N., 131°38'45" W.) to:

Ports
Cordova, Alaska, U.S.A., 656
Seattle, Washington, U.S.A., 634
Sitka, Alaska, U.S.A., 224
Whittier, Alaska, U.S.A., 1,839

KETTA, GHANA. See Kwitta.

*JUNCTION POINT.—See Preface for use of junction points.

KEY WEST, FLORIDA, U.S.A.

(24°33'30" N., 81°48'30" W.) to:

Junction Points*

Bishop Rock, England (track A), 3,828
 Bishop Rock, England (track B), 3,812
 Bishop Rock, England (track C), 3,783
 Fastnet, Ireland (track A), 3,807
 Fastnet, Ireland (track B), 3,778
 Fastnet, Ireland (track C), 3,772
 Inishtrahull, Ireland (track A), 3,852
 Inishtrahull, Ireland (track B), 3,826
 Inishtrahull, Ireland (track C), 3,767
 Montreal, Canada, 2,466
 Panama, Panama, 1,108
 Pentland Firth, Scotland (track A), 4,147
 Pentland Firth, Scotland (track B), 4,101
 Pentland Firth, Scotland (track C), 4,000
 Strait of Gibraltar, 3,949
 Straits of Florida, 73
 Yucatan Channel, 251

Ports

Alvaro Obregon, Mexico, 748
 Angmagssalik, Greenland (direct), 3,209
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,223
 Antilla, Cuba, 434
 Argentia, Canada, 1,953
 Arkhangelsk, U.S.S.R., 5,150
 Baracoa, Cuba, 490
 Belem, Brazil, 2,603
 Belize, British Honduras (via main ship channel), 590
 Bridgetown, Barbados, 1,459
 Buenos Aires, Argentina, 5,712
 Champeche, Mexico (via main ship channel), 632
 Cap Haitien, Haiti (via Old Bahama Channel), 619
 Carmen, Mexico (via main ship channel), 708
 Cartagena, Colombia (via Old Bahama Channel and Windward Passage), 1,130
 Cartagena, Colombia (via Yucatan Channel), 1,144
 Castries, St. Lucia, 1,358
 Charlotte Amalie, Virgin Islands, 1,036
 Charlottetown, Canada, 1,788
 Christiansted, Virgin Islands, 1,064
 Colon, Panama (via ship channel and Yucatan Channel), 1,065
 Dakar, Senegal, 3,709
 Elizabeth Harbor, Bahamas, 485
 Freetown, Sierra Leone, 4,076
 Funchal, Madeira Island, 3,445

Georgetown, British Guiana, 1,818
 Great Harbor, Culebra Island (via Old Bahama Channel and north of Hispaniola), 1,017
 Guantanamo, Cuba (via Old Bahama Channel), 587
 Habana, Cuba, 92
 Halifax, Canada, 1,602
 Hamilton, Bermuda, 1,093
 Horta, Azores, 2,857
 Kingston, Jamaica (via Windward Passage), 752
 Kingston, Jamaica (via Yucatan Channel), 802
 La Gualra, Venezuela (via Old Bahama Channel and Windward Passage), 1,280
 Lisboa, Portugal, 3,765
 Nuevitas, Cuba, 331
 Pointe a Pitre, Guadeloupe (via Virgin Passage), 1,296
 Pointe a Pitre, Guadeloupe (via Mona Passage), 1,297
 Ponce, Puerto Rico (via Old Bahama Channel and Mona Passage), 969
 Port au Prince, Haiti (via Old Bahama Channel), 650
 Port of Spain, Trinidad (via Old Bahama Channel and Mona Passage), 1,484
 Port of Spain, Trinidad (via Old Bahama Channel and Windward Passage), 1,534
 Puerto Cabello, Venezuela (via Old Bahama Channel and Windward Passage), 1,248
 Recife, Brazil (via Old Bahama Channel and Mona Passage), 3,539
 Rio de Janeiro, Brazil, 4,611
 San Juan, Puerto Rico, 966
 Santa Barbara de Samana, Dominican Republic, 811
 Santiago de Cuba, Cuba (via Windward Passage), 637
 Santiago de Cuba, Cuba (via west end of Cuba), 796
 Santo Domingo, Dominican Republic, 936
 Tampico, Mexico, 907
 Tuxpan, Mexico, 891
 Veracruz, Mexico, 869
 Willemstad, Curacao (via Windward Passage), 1,134

KHAFJI, RA'S AL, NEUTRAL ZONE, PERSIAN GULF. See Ra's al Khafji.

KHALKIS, GREECE

(38°27'40" N., 23°35'15" E.) to:

Junction Points*

Port Said, U.A.R., 630
 Strait of Gibraltar (via Corinth Canal), 1,545
 Strait of Gibraltar (south of Greece), 1,562

Ports

Iraklion, Crete, 210
 Izmir, Turkey, 210
 Volos, Greece, 88

KHANIA, CRETE

(35°31'15" N., 24°01'00" E.) to:

Junction Points*

Port Said, U.A.R., 515
 Strait of Gibraltar, 1,459

Ports

Izmir, Turkey, 276
 Messina, Sicily, 452
 Piraievs, Greece, 148

KHARK, JAZIREH-YE, IRAN. See Jazireh-Ye Khark.

KHAWR AL AMA, NEUTRAL ZONE, PERSIAN GULF

(28°38'00" N., 48°28'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 5,416
 Cape of Good Hope, Republic of South Africa, 5,080
 Port Said, U.A.R., 3,262
 Singapore, 3,801

Ports

Aden, Aden Protectorate, 1,873
 Bombay, India, 1,493

KHOLMSK, SAKHALIN, U.S.S.R.

(47°03'00" N., 142°02'45" E.) to:

Ports

Bukhta Broutona, Kuril Islands, 519
 Kasatka, Japan, 368
 Matsugahama, Japan, 361
 Shelekhovo, Kuril Islands, 707
 Slavnoye, Kuril Islands, 364
 Tomari, Japan, 314

KHORRAMSHAHR, IRAN

(30°25'30" N., 48°10'00" E.)

Subtract 18½ miles from Al Basrah distances.

*JUNCTION POINT.—See Preface for use of junction points.

KIAMA HARBOR, AUSTRALIA
(34°40'00" S., 150°52'00" E.) to:

Junction Points*
Torres Strait, Australia, 1,760
Wilson Promontory, Australia, 379

Ports
Hobart, Tasmania, 583
Newcastle, Australia, 117
Wellington, New Zealand, 1,213

KIEL, GERMANY
(54°20'00" N., 10°09'30" E.)

For distances via Kiel Canal, add 2½
miles to Kiel Canal (east end)

For distances via Kiel Fiord, add 1½
miles to Kiel Canal (east end)

**KIEL CANAL (EAST END), GER-
MANY***
(54°22'00" N., 10°09'00" E.) to:

Junction Points*
Bishop Rock, England, 727
Pentland Firth, Scotland, 565
Ushant, France, 716

Ports
Aalborg, Denmark, 207
Aarhus, Denmark, 131
Abenra, Denmark, 66
Amsterdam, Netherlands, 291
Antwerpen, Belgium, 398
Assens, Denmark, 65
Baltiysk, U.S.S.R., 353
Bremerhaven, Germany, 129
Calais, France, 408
Cherbourg, France, 554
Den Helder, Netherlands, 263
Dover, England, 410
Dundee, Scotland, 501
Dunkerque, France, 386
Emden, Germany, 197
Esbjerg, Denmark, 372
Faborg, Denmark, 53
Fecamp, France, 482
Flensburg, Germany, 52
Fredericia, Denmark, 85
Frederikshavn, Denmark, 200
Gavle, Sweden, 615
Gdansk, Poland, 344
Gdynia, Poland, 339
Goteborg, Sweden, 230
Grena, Denmark, 140
Haderslev, Denmark, 72
Halmsted, Sweden, 188
Halsingborg, Sweden, 176

Hamburg, Germany, 91
Hamina, Finland, 747
Hango, Finland, 564
Helsingor, Denmark, 175
Helsinki, Finland, 625
Hobro, Denmark, 193
Horsens, Denmark, 131
Kalmar, Sweden, 289
Kalundborg, Denmark, 111
Karlskrona, Sweden, 235
Klaipeda, Lithuania, 400
Kobenhavn, Denmark (via Store
Bael), 202
Kobenhavn, Denmark (via The
Sound), 162
Koge, Denmark, 153
Kolding, Denmark, 86
Korsor, Denmark, 73
Kotka, Finland, 694
Kyndbyvaerkets, Denmark, 164
Landskrona, Sweden, 167
Le Havre, France, 522
Leningrad, U.S.S.R., 779
Liepaja, Latvia, 405
Limhamn, Sweden, 159
London, England, 439
Lubeck, Germany, 99
Lulea, Sweden, 875
Malmo, Sweden, 205
Masnedsund, Denmark, 149
Middlefart, Denmark, 84
Musko Island, Sweden, 473
Naestved, Denmark, 94
Nakskov, Denmark, 46
Newcastle, England, 439
Norrkoping, Sweden, 459
Odense, Denmark, 117
Oostende, Belgium, 364
Ornskoldsvik, Sweden, 733
Oulu, Finland, 918
Oxelosund, Sweden, 420
Peenemunde, Germany, 185
Pitea, Sweden, 864
Plymouth, England, 639
Porkkala, Finland, 647
Portland, England, 565
Portsmouth, England, 515
Randers, Denmark, 188
Rauma, Finland, 678
Reposaari, Finland, 654
Riga, Latvia, 555
Ronne, Denmark, 175
Rostock, Germany, 92
Rotterdam, Netherlands, 323
Ruch'i, U.S.S.R., 766
Sassnitz, Germany, 143
Sonderborg, Denmark, 46
Southampton, England, 533
Stockholm, Sweden, 503
Stralsund, Germany, 104
Sundsvall, Sweden, 684
Swinoujscie, Poland, 186

Szczecin, Poland, 222
Tallinn, Estonia, 603
Travemunde, Germany, 88
Trelleborg, Sweden, 141
Turku, Finland, 576
Uusikaupunki, Finland, 624
Umea, Sweden, 751
Vaasa, Finland, 744
Vejle, Denmark, 106
Ventspils, Latvia, 434
Wilhelmshaven, Germany, 126
Wismar, Germany, 84
Zeebrugge, Belgium, 354

KIIRUN, TAIWAN. See Chi-Lung
Chiang.

KIMCHAEK, KOREA
(40°39'15" N., 129°12'30" E.) to:

Ports
Hakodate, Japan, 540
Maizuru, Japan, 431
Pusan, Korea, 351
Shimonoseki, Japan, 421
Vladivostok, U.S.S.R., 206
Yosu, Korea, 439

KINGSTON, JAMAICA
(17°57'30" N., 76°47'00" W.) to:

Junction Points*
Bishop Rock, England (track A),
3,854
Fastnet, Ireland (track A), 3,752
Fastnet, Ireland (track B), 3,748
Inishtrahull, Ireland (track A), 3,878
Inishtrahull, Ireland (track B), 3,868
Inishtrahull, Ireland (track C), 3,852
Panama, Panama, 594
Pentland Firth, Scotland (track A),
4,083
Pentland Firth, Scotland (track B),
4,067
Pentland Firth, Scotland (track C),
4,032
Strait of Gibraltar, 3,891
Straits of Florida (via Windward
Passage), 802
Yucatan Channel, 550

Ports
Almirante, Panama, 657
Alvaro Obregon, Mexico, 1,092
Baltimore, Maryland, U.S.A. (via
Windward Passage and Crooked
Island Passage), 1,401
Baracoa, Cuba, 265
Barahona, Dominican Republic, 364

*JUNCTION POINT.—See Preface for use of junction points.

Barranquilla, Colombia, 442
 Belem, Brazil, 2,231
 Belize, British Honduras, 685
 Bocas del Toro, Panama, 604
 Boston, Massachusetts, U.S.A., 1,657
 Brunswick, Georgia, U.S.A., 1,038
 Buenos Aires, Argentina, 5,295
 Caldera Bay, Dominican Republic, 378
 Cap Haitien, Haiti, 326
 Cape Town, Republic of South Africa, 6,314
 Cardenas, Cuba, 703
 Carmen, Mexico, 1,056
 Cartagena, Colombia, 479
 Casilda, Cuba, 372
 Castries, St. Lucia, 950
 Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,064
 Charlotte Amalie, Virgin Islands, 705
 Colon, Panama, 551
 Covenas, Colombia, 528
 Dakar, Senegal, 3,436
 Elizabeth Harbor, Bahamas, 498
 Funchal, Madeira Island, 3,349
 Georgetown, British Guiana, 1,334
 Gonaives, Haiti, 263
 Guantanamo, Cuba, 180
 Habana, Cuba (via Yucatan Channel), 737
 Habana, Cuba (via Windward Passage), 762
 Haina, Dominican Republic, 417
 Halifax, Canada, 1,795
 Hamilton, Bermuda, 1,144
 Horta, Azores, 2,818
 Jacksonville, Florida, U.S.A. (via Crooked Island Passage and Windward Passage), 1,016
 Key West, Florida, U.S.A. via Windward Passage, 752
 Key West, Florida, U.S.A. (via Yucatan Channel), 802
 La Guaira, Venezuela, 732
 La Romana, Dominican Republic, 470
 Lake Charles, Louisiana, U.S.A., 1,190
 Limon, Costa Rica, 605
 Lisboa, Portugal, 3,725
 Liverpool, Canada, 1,744
 Manzanillo, Cuba, 283
 Matanzas, Cuba, 717
 Miami, Florida, U.S.A., 746
 Miragoane, Haiti, 243
 Nassau, Bahamas, 667
 New York, New York, U.S.A. (via Crooked Island Passage and Windward Passage), 1,474
 Norfolk, Virginia, U.S.A. (via Crooked Island Passage and Windward Passage), 1,279

Nuevas, Cuba, 448
 Oranjestad, Aruba, 223
 Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,446
 Pina, Panama, 558
 Pointe a Pitre, Guadeloupe, 910
 Port au Prince, Haiti, 277
 Port de Paix, Haiti, 432
 Port of Spain, Trinidad, 1,003
 Portland, Maine, U.S.A., 1,679
 Portsmouth, New Hampshire, U.S.A., 1,655
 Puerto Barrios, Guatemala, 715
 Puerto Cabello, Venezuela, 697
 Puerto Cabezas, Nicaragua, 451
 Puerto Cayo Moa, Cuba, 301
 Puerto Colombia, Colombia, 438
 Puerto Cortes, Honduras, 671
 Puerto Tanamo, Cuba, 318
 Puerto Vita, Cuba, 364
 Punta Cardon, Venezuela, 530
 Rio de Janeiro, Brazil, 4,194
 St. John, Canada, 1,794
 St. Johns, Antigua, 870
 St. Louis, Marie Galante, 903
 St. Marc, Haiti, 254
 San Juan, Puerto Rico (south of Hispaniola), 643
 San Juan, Puerto Rico (north of Hispaniola), 685
 San Pedro de Macoris, Dominican Republic, 461
 Santa Lucia, Cuba, 651
 Santiago de Cuba, Cuba, 176
 Santo Domingo, Dominican Republic, 430
 Savannah, Georgia, U.S.A. (via Crooked Island Passage and Windward Passage), 1,063
 Sint Nicolaas, Aruba, 528
 Surgidero de Batahona, Cuba, 595
 Sydney, Canada, 1,982
 Tampico, Mexico, 1,252
 Tuxpan, Mexico, 1,243
 Veracruz, Mexico, 1,210
 Wilmington, North Carolina, U.S.A. (via Crooked Island Passage and Windward Passage), 1,115
 Yarmouth, Canada, 1,710

KINGSTOWN, ST. VINCENT
 (13°09'00" N., 61°14'00" W.) to:

Ports
 Bridgetown, Barbados, 98
 Castries, St. Lucia, 60
 Fernando de Noronha, 1,320
 Fort de France, Martinique, 89
 Hamilton, Bermuda, 1,185
 New York, New York, U.S.A., 1,791

KIRKENES, NORWAY
 (69°43'45" N., 30°02'00" E.) to:

Ports
 Longyearbyen, Svalbard, 637
 Pechenga, U.S.S.R., 53

KIRKWALL, ORKNEY ISLANDS
 (59°00'00" N., 2°57'30" W.) to:

Ports
 Reykjavik, Iceland, 700

KISKA, ALASKA, U.S.A.
 (51°59'00" N., 177°32'30" E.) to:

Ports
 Anadyrskiy Liman, U.S.S.R., 804
 Apra, Guam, 2,822
 Barrow, Alaska, U.S.A., 1,427
 Bukhta Broutona, Kuril Islands, 1,041
 Cordova, Alaska, 1,435
 Dutch Harbor, Alaska, U.S.A., 596
 Hakodate, Japan, 1,656
 Honolulu, Hawaii, U.S.A., 2,185
 Kasatka, Japan, 1,274
 Manila, Philippines, 3,664
 Matsugahama, Japan, 1,345
 Midway Island, 1,453
 Petropavlovsk, U.S.S.R., 724
 San Francisco, California, U.S.A., 2,629
 Shelekhovo, Kuril Islands, 863
 Slavnoye, Kuril Islands, 1,227
 Tomari, Japan, 1,406
 Yokohama, Japan, 1,997

KITTA, GHANA. See Kwitta.

KLAIPEDA, LITHUANIA
 (55°43'00" N., 21°07'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 400
 Skagens Odde, Denmark (via Store Baelt), 592
 Skagens Odde, Denmark (via The Sound and north of Bornholm), 462

Ports
 Horsens, Denmark, 459
 Koge, Denmark, 350
 Oslo, Norway (light draft), 584
 Oslo, Norway (via Store Baelt and south of Bornholm), 716
 Oxelosund, Sweden, 232
 Rostock, Germany, 347

*JUNCTION POINT.—See Preface for use of junction points.

KOBE, JAPAN

(34°40'00" N., 135°12'00" E.) to:

Junction Points*

Panama, Panama, 7,964
Punta Arenas, Chile, 9,429
Singapore, 2,689

Ports

Aleksandrovsk, U.S.S.R., 1,384
Apra, Guam, 1,386
Auckland, New Zealand, 4,875
Cebu, Philippines (via San Bernardino Strait), 1,601
Darwin, Australia (via Selat Sele), 2,901
Djakarta, Indonesia (via Balintang Channel), 2,987
Dutch Harbor, Alaska, U.S.A., 2,833
Hagata, Japan, 304
Haiphong, Vietnam (via Osumi Kaikyo and Hainan Strait), 1,833
Hakodate, Japan, 816
Hirohata, Japan, 34
Hiroshima, Japan, 179
Hong Kong, B.C.C. (via Osumi Kaikyo), 1,372
Honolulu, Hawaii, U.S.A., 3,669
Hsia-men, China (via Osumi Kaikyo), 1,117
Iloilo, Philippines (via San Bernardino Strait), 1,623
Imabari, Japan, 120
Inchon, Korea, 733
Itozaki, Japan, 113
Iwakuni, Japan, 166
Kagoshima, Japan (via Tomogashima Suido), 379
Kagoshima, Japan (via Bungo Suido), 422
Kamaishi, Japan, 631
Kuang-chou, China (via Osumi Kaikyo), 1,455
Kushiro, Japan, 876
Lo-hsing-ta Mao-ti, China (via Osumi Kaikyo), 1,003
Los Angeles, California, U.S.A., 5,185
Lu-shun, China, 881
Manila, Philippines (via Balintang Channel), 1,563
Miike, Japan, 462
Nagasaki, Japan, 400
Nagoya, Japan, 245
Najin, Korea, 754
Nase, Japan, 483
Niihama, Japan, 113
Pago Pago, American Samoa, 4,308
Petrovsk, U.S.S.R., 1,705
Portland, Oregon, U.S.A., 4,590
Pusan, Korea, 361
Sakaidecho, Japan, 107
San Diego, California, U.S.A., 5,204

San Francisco, California, U.S.A., 4,819
Seattle, Washington, U.S.A. (south of Aleutian Islands), 4,559
Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,527
Shang-hai, China (via Naikai), 789
Shang-hai, China (via Osumi Kaikyo), 826
Shan-tou, China (via Osumi Kaikyo), 1,222
Shimizu, Honshu, Japan, 279
Shimonoseki, Japan, 241
Sydney, Australia, 4,384
Ta-ku, China (via Naikai), 1,034
Ta-lien, China, 877
Tan-shui, China (via Osumi Kaikyo), 933
Uno, Japan, 71
Valparaiso, Chile, 9,534
Vancouver, Canada, 4,541
Vinh Cam Ranh, Vietnam, 2,013
Vladivostok, U.S.S.R. (via Naikai), 805
Wei-hai-wei, China (via Naikai), 806
Yen-tai, China, 840
Yokohama, Japan, 357

KOBENHAVN, DENMARK

(55°42'00" N., 12°36'06" E.) to:

Junction Points*

Kiel Canal (east end) (via Store Bael), Germany, 202
Kiel Canal (east end) (via The Sound), Germany, 162
Skagens Odde, Denmark, 150

Ports

Aalborg, Denmark, 138
Aarhus, Denmark, 108
Abenra, Denmark, 204
Frederikshavn, Denmark, 142
Gdansk, Poland, 468
Gdynia, Poland, 464
Haderslev, Denmark, 175
Helsinki, Finland, 772
Kalundborg, Denmark, 115
Karlskrona, Sweden, 148
Leningrad, U.S.S.R., 917
Lubeck, Germany, 148
Oslo, Norway, 272
Peenemunde, Germany, 128
Riga, Latvia, 696
Rostock, Germany, 231
Sassnitz, Germany, 95
Stockholm, Sweden (via Store Bael and Dalarn Kanal), 603
Stockholm, Sweden (via Store Bael and Sandofjarden), 646
Stralsund, Germany, 81

Travemunde, Germany (via Store Bael), 234
Travemunde, Germany (via The Sound), 139
Vejle, Denmark, 149
Wismar, Germany, 132

KOCHI, JAPAN

(33°32'06" N., 133°33'30" E.) to:

Ports

Hakodate, Japan (east of Honshu), 832
Hakodate, Japan (via Shimonoseki Kaikyo), 894
Nagasaki, Japan (via Osumi Kaikyo), 366
Yokohama, Japan, 372

KODIAK, ALASKA, U.S.A.

(57°47'00" N., 152°25'00" W.) to:

Junction Points*

Panama, Panama, 4,907
Singapore, 6,020

Ports

Apra, Guam, 3,928
Auckland, New Zealand, 5,942
Ching-tao, China, 3,975
Darwin, Australia, 5,859
Guayaquil, Ecuador, 5,212
Hai-kou, Hai-nan Tao, 4,866
Hong Kong, B.C.C., 4,616
Honolulu, Hawaii, U.S.A., 2,231
Juneau, Alaska, U.S.A., 610
Malakal, Palau Islands, 4,579
Manila, Philippines (north of Aleutian Islands), 4,823
Midway Island, 2,088
Naknek, Alaska, U.S.A., 881
Noumea, New Caledonia, 5,281
Pago Pago, American Samoa, 4,441
Palmyra Island, 3,162
Papeete, Society Islands, 4,532
Sai Gon, Vietnam, 5,484
San Diego, California, U.S.A., 2,121
San Francisco, California, U.S.A., 1,693
Seattle, Washington, U.S.A., 1,257
Shang-hai, China, 3,967
Surabaya, Indonesia, 6,086
Suva, Fiji Islands, 4,853
Sydney, Australia, 6,222
Truk, Caroline Islands, 4,008
Unalakleet, Alaska, U.S.A., 884
Valparaiso, Chile, 6,803
Vladivostok, U.S.S.R., 3,105
Wake Island, 2,961
Yokohama, Japan (north of Aleutian Islands), 3,141

*JUNCTION POINT.—See Preface for use of junction points.

KOGÉ, DENMARK

(55°27'15" N., 12°12'00" E.) to:

Junction Points*Kiel Canal (east end), Germany, 153
Skagens Odde, Denmark, 161**Ports**Klaipeda, Lithuania, 350
Swinoujscie, Poland, 156**KOKURA, JAPAN**

(33°55'00" N., 130°52'00" E.)

Eastbound from Kokura, add 7 miles
to Moji distances.Westbound from Kokura, subtract 7
miles from Moji distances.**KOLDING, DENMARK**

(55°29'40" N., 9°30'00" E.) to:

Junction Points*Kiel Canal (east end), Germany, 86
Skagens Odde, Denmark, 289**Ports**Goteborg, Sweden, 330
Liepaja, Latvia, 472
Swinoujscie, Poland, 253**KOMATSUSHIMA, JAPAN**

(34°01'00" N., 134°36'00" E.) to:

PortsAomori, Japan, 813
Kagoshima, Japan, 344
Kure, Japan, 217
Osaka, Japan, 58
Yokohama, Japan, 320**KONAN, KOREA.** See Hungnam.**KONIYA, RYUKYU ISLANDS**

(28°08'30" N., 129°18'45" E.) to:

PortsHonolulu, Hawaii, U.S.A., 3,948
Midway Island, 2,799
Port Moresby, Papua, 3,063
Saipan, Mariana Islands, 1,199
Wake Island, 2,107**KORSAKOV, SAKHALIN, U.S.S.R.**

(46°37'30" N., 142°45'30" E.) to:

PortsBukhta Broutona, Kuril Islands, 431
Honto, U.S.S.R., 115
Hungnam, Korea, 794
Kasatka, Japan, 285
Matsugahama, Japan, 279
Shelekhovo, Kuril Islands, 618
Slavnoye, Kuril Islands, 276
Sovetskaya Gaven, U.S.S.R., 264
Tomari, Japan, 239**KORSOR, DENMARK**

(55°20'07" N., 11°07'48" E.) to:

Junction Points*Kiel Canal (east end), Germany, 73
Skagens Odde, Denmark, 162**Ports**Gdynia, Poland, 344
Stockholm, Sweden, 524
Swinoujscie, Poland, 239**KOTKA, FINLAND**

(60°27'00" N., 26°59'00" E.) to:

Junction Points*Kiel Canal (east end), Germany, 694
Skagens Odde, Denmark, 755**Ports**Helsinki, Finland, 99
Riga, Latvia, 296
Stockholm, Sweden, 311
Vysotsk, U.S.S.R., 69**KOTONU, DAHOMEY.** See Cotonou.**KOUNDA, U.S.S.R.**

(66°42'00" N., 32°52'00" E.)

Add 76½ miles to Arkhangelsk
distances.**KOYVISTO, U.S.S.R.**

(60°21'30" N., 28°36'00" E.)

Via Ostrov Ruonti pilot station. Sub-
tract 1 mile from Vysotsk distances.**KRAGERO, NORWAY**

(58°51'40" N., 9°23'35" E.) to:

Junction Points*

Pentland Firth, Scotland, 441

PortsBergen, Norway, 289
London, England, 582
Oslo, Norway, 95**KRALENDIJK, BONAIRE**

(12°09'30" N., 68°16'40" W.) to:

Ports

Guantanamo, Cuba, 620

KRIBI, CAMEROON

(2°56'00" N., 9°54'00" E.) to:

PortsDouala, Cameroon, 81
Port Gentil, Gabon, 231
Santa Isabel, Fernando Poo, 106
Takoradi, Ghana, 704**KRISTIANSAND, NORWAY**

(58°08'30" N., 7°59'40" E.) to:

Junction Points*Bishop Rock, England, 309
Pentland Firth, Scotland, 372
Skagens Odde, Denmark, 92
Ushant, France, 794**Ports**Aberdeen, Scotland, 338
Amsterdam, Netherlands, 381
Antwerpen, Belgium, 488
Bergen, Norway, 226
Bodo, Norway, 733
Bremerhaven, Germany, 292
Calais, France, 486
Cherbourg, France, 632
Dover, England, 488
Dunkerque, France, 475
Egersund, Norway, 86
Emden, Germany, 316
Esbjerg, Denmark, 206
Hamburg, Germany, 333
Hull, England, 407
Kristiansund, Norway, 447
Le Havre, France, 600
Leith, Scotland, 394
London, England, 514
Newcastle, England, 376
Oostende, Belgium, 453
Oslo, Norway, 163
Plymouth, England, 717
Portland, England, 643
Portsmouth, England, 593
Rotterdam, Netherlands, 413
Southampton, England, 611
Stavanger, Norway, 142
Trondheim, Norway, 436
Wilhelmshaven, Germany, 286

*JUNCTION POINT.—See Preface for use of junction points.

KRISTIANSUND, NORWAY
(63°06'40" N., 7°45'00" E.) to:

Ports

Bergen, Norway, 232
 Kristiansand, Norway, 447
 Oslo, Norway, 599
 Stavanger, Norway (inner lead), 332

KRONSTADT, U.S.S.R.
(59°59'00" N., 29°45'00" E.)

Subtract 17 miles from Leningrad distances.

KRUNG THEP, THAILAND
(13°43'00" N., 100°31'00" E.) to:

Junction Points*

Singapore, 842
 Sunda Strait, Indonesia, 1,292

Ports

Aleksandrovsk, Sakhalin, U.S.S.R., 3,639
 Chinnampo, Korea, 2,652
 Inchon, Korea, 2,591
 Los Angeles, California, U.S.A. (via Balintang Channel), 7,775
 Manila, Philippines, 1,435
 Mokpo, Korea, 2,438
 Petropavlovsk, U.S.S.R., 4,252
 Pusan, Korea, 2,533
 Sihanoukville, Cambodia, 300
 Vinh Cam Ranh, Vietnam, 817
 Vladivostok, U.S.S.R., 3,035
 Wonsan, Korea, 2,885

KUANG-CHOU, CHINA
(23°07'00" N., 113°16'00" E.) to:

Junction Points*

Panama, Panama, 9,201
 Singapore, 1,518
 Torres Strait, Australia, 2,803

Ports

Apra, Guam, 1,905
 Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 1,043
 Darwin, Australia, 2,438
 Djakarta, Indonesia, 1,842
 Dutch Harbor, Alaska, U.S.A., 4,117
 Hakodate, Japan, 1,893
 Hong Kong, B.C.C., 83
 Honolulu, Hawaii, U.S.A., 4,940
 Hsia-men, China, 373

Iloilo, Philippines (via Verde Island Passage and Jintotolo Channel), 1,013

Iloilo, Philippines (via Mindoro Strait), 978

Inchon, Korea, 1,277

Kobe, Japan (via Osumi Kaikyo), 1,455

Lo-hsing-ta Mao-ti, China, 542

Lu-shun, China, 1,348

Manila, Philippines, 714

Nagasaki, Japan, 1,152

Nikolayevsk, U.S.S.R., 2,486

Noumea, New Caledonia, 4,208

Pago Pago, American Samoa, 5,038

Papeete, Society Islands, 6,227

Petropavlovsk, U.S.S.R. (via Proliv Chelvertyy Kurilskiy and La Perouse Strait), 2,941

Rabaul, New Britain, 2,856

Shang-hai, China (via Hsiao-pan Men), 923

Shan-tou, China, 266

Shimonoseki, Japan, 1,262

Surabaya, Indonesia, 1,977

Suva, Fiji Islands, 4,596

Ta-ku, China, 1,501

Tan-shui, Taiwan, 528

Vladivostok, U.S.S.R., 1,728

Wei-hai-wei, China, 1,273

Yen-tai, China, 1,307

Yokohama, Japan, 1,668

KUCHING, SARAWAK
(1°33'35" N., 110°20'35" E.) to:

Junction Points*

Lombok Strait, Indonesia, 974
 Singapore, 443

Ports

Djakarta, Indonesia, 627
 Iloilo, Philippines, 948
 Olongapo, Philippines, 992
 Zamboanga, Philippines, 863

KUNDLA, INDIA. See Kandla.

KUNSAN, JAPAN
(35°59'18" N., 126°43'00" E.) to:

Ports

Pusan, Korea, 376
 Sasebo, Japan, 343
 Shang-hai, China, 457
 Ta-lien, China, 94
 Yosu, Korea, 245

KURE, JAPAN
(34°14'00" N., 132°32'00" E.) to:

Ports

Apra, Guam, 1,460
 Hirohata, Japan, 126
 Imabari, Japan, 63
 Itozaki, Japan, 73
 Kagoshima, Japan, 296
 Komatsushima, Japan, 217
 Niihama, Japan, 76½
 Sakaidacho, Japan, 107
 Shimizu, Shikoku, Japan, 141
 Shimonoseki, Japan, 116
 Tokuyama, Japan, 76
 Uno, Japan, 117
 Wakamatsu, Japan, 125
 Yokohama, Japan, 515

KUSAIE ISLAND, CAROLINE ISLANDS. See Lele.

KUSHIRO, JAPAN
(42°58'00" N., 144°21'30" E.) to:

Ports

Hakodate, Japan, 210
 Kobe, Japan, 876
 Pusan, Korea, 876
 Vladivostok, U.S.S.R., 624
 Yokohama, Japan, 594

KUSIRO, JAPAN. See Kushiro.

KUWAIT. See Al Kuwayt.

KWAJALEIN, MARSHALL ISLANDS
(9°23'00" N., 167°28'30" E.) to:

Ports

Apra, Guam, 1,332
 Eniwetok, Marshall Islands, 359
 Honolulu, Hawaii, U.S.A., 2,125
 San Diego, California, U.S.A., 4,394
 San Francisco, California, U.S.A., 4,124

KYNDYVAERKETS, DENMARK
(55°48'36" N., 11°52'48" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 164
 Skagens Odde, Denmark, 136

Ports

Gdynia, Poland, 334
 Stockholm, Sweden, 493
 Swinoujscie, Poland, 195

*JUNCTION POINT.—See Preface for use of junction points.

KYOMIPO, KOREA

(38°44'00" N., 125°37'00" E.)

Add 16 miles to Chinnampo distances.

KYRENIA, CYPRUS

(35°20'45" N., 33°19'00" E.) to:

Junction Points*

Port Said, U.A.R., 297

Strait of Gibraltar, 1,910

Ports

Haifa, Israel, 246

Iraklion, Crete, 406

Izmir, Turkey, 524

LA CEIBA, HONDURAS

(15°46'30" N., 86°50'00" W.) to:

Junction Points*

Panama, Panama, 709

Ports

Colon, Panama, 666

New York, New York, U.S.A., 1,743

Puerto Cabezas, Nicaragua, 316

LA CORUNA, SPAIN

(43°22'00" N., 8°24'00" W.) to:

Junction Points*

Ushant, France, 331

Ports

Horta, Azores, 967

New York, New York, U.S.A., 2,917

San Juan, Puerto Rico, 3,255

Santander, Spain, 224

LA GUAIRA, VENEZUELA

(10°37'00" N., 66°56'30" W.) to:

Junction Points*

Bishop Rock, England, 3,777

Montreal, Canada, 2,941

Panama, Panama, 884

Strait of Gibraltar, 3,634

Straits of Florida (via Windward Passage), 1,331

Yucatan Channel, 1,242

Ports

Alvaro Obregon, Mexico, 1,781

Amuay, Venezuela, 276

Baltimore, Maryland, U.S.A., 1,813

Barranquilla, Colombia, 531

Belize, British Honduras, 1,328

Boston, Massachusetts, U.S.A., 1,955

Campeche, Mexico, 1,635

Carmen, Mexico, 1,714

Cartagena, Colombia, 614

Castries, St. Lucia, 405

Charleston, South Carolina, U.S.A., 1,549

Charlotte Amalie, Virgin Islands, 479

Cienfuegos, Cuba, 1,050

Colon, Panama, 841

Dakar, Senegal, 2,911

Guantanamo, Cuba, 737

Guiria, Venezuela, 339

Gulfport, Mississippi, U.S.A. (via Old Bahama Channel and Windward Passage), 1,806

Gulfport, Mississippi, U.S.A. (via Yucatan Channel), 1,801

Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,292

Halifax, Canada, 2,060

Hamilton, Bermuda, 1,335

Key West, Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 1,280

Kingston, Jamaica, 732

New York, New York, U.S.A. (via Mona Passage), 1,848

Norfolk, Virginia, U.S.A., 1,687

Oranjestad, Aruba, 207

Paramaribo, Surinam, 832

Pedernales, Venezuela, 359

Philadelphia, Pennsylvania, U.S.A., 1,838

Pointe a Pitre, Guadeloupe, 467

Port au Prince, Haiti, 801

Port of Spain, Trinidad (south of Isla de Margarita), 329

Puerto Colombia, Colombia, 539

Puerto Cortes, Honduras, 1,294

Puerto Cumarebo, Venezuela, 168

Puerto la Cruz, Venezuela, 145

Puerto Sucre, Venezuela, 205

St. Georges, Grenada, 322

St. John, Canada, 2,086

San Felix, Venezuela, 673

San Fernando, Trinidad, 340

San Juan, Puerto Rico, 506

San Juan del Norte, Nicaragua, 1,026

Santo Domingo, Dominican Republic, 502

Savannah, Georgia, U.S.A. (via Mona Passage), 1,575

Sint Nicolaas, Aruba, 207

Sydney, Canada, 2,215

Tuxpan, Mexico, 1,923

Veracruz, Mexico, 1,888

Willemstad, Curacao, 150

LA ISABELA, CUBA. See Isabela.**LA LIBERTAD, ECUADOR**

(2°11'45" S., 80°55'00" W.) to:

Junction Points*

Panama, Panama, 674

Punta Arenas, Chile, 3,258

Ports

Buenaventura, Colombia, 445

Callao, Peru, 682

LA LIBERTAD, EL SALVADOR

(13°28'30" N., 89°19'15" W.) to:

Junction Points*

Panama, Panama, 806

Ports

Corinto, Nicaragua, 141

Puntarenas, Costa Rica, 383

Salina Cruz, Mexico, 391

San Juan del Sur, Nicaragua, 239

LA LIBERTAD, MEXICO

(29°54'00" N., 112°45'00" W.) to:

Junction Points*

Panama, Panama, 2,534

Ports

Acajutla, El Salvador, 1,739

Acapulco, Mexico, 1,122

Champerico, Guatemala, 1,606

Corinto, Nicaragua, 1,902

Guaymas, Mexico, 182

La Union, El Salvador, 1,875

Los Angeles, California, U.S.A., 1,315

Mazatlan, Mexico, 548

Puntarenas, Costa Rica, 2,120

Salina Cruz, Mexico, 1,424

San Blas, Mexico, 660

San Diego, California, U.S.A., 1,246

San Francisco, California, U.S.A., 1,648

San Jose, Guatemala, 1,684

San Juan del Sur, Nicaragua, 2,000

LA LUZ, CANARY ISLANDS. See Las Palmas de Gran Canaria**LA PALLICE, FRANCE**

(46°09'36" N., 1°13'21" W.) to:

Junction Points*

Strait of Gibraltar, 950

Ushant, France, 245

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Bilboa, Spain, 214
 Bordeaux, France, 111
 St. Nazaire, France, 108
 Santander, Spain, 201

LA PALMA, PANAMA

(8°25'00" N., 78°08'00" W.) to:

Junction Points*

Panama, Panama, 104

Ports

Acapulco, Mexico, 1,466
 Callao, Peru, 1,336

LA PLATA, ARGENTINA

(34°47'00" S., 57°51'15" W.)

Subtract 28 miles from Buenos Aires distances.

LA ROCHELLE, FRANCE

(46°09'00" N., 1°09'00" W.)

Add 2 miles to La Pallice distances.

LA ROMANA, DOMINICAN REPUBLIC

(18°24'00" N., 68°57'00" W.) to:

Junction Points*

Panama, Panama, 889

Ports

Barranquilla, Colombia, 569
 Kingston, Jamaica, 470
 San Juan, Puerto Rico, 191
 Willemstad, Curacao, 391

LA SALINA, VENEZUELA

(10°22'00" N., 71°28'00" W.)

Add 21 miles to Maracaibo distances.

LA SPEZIA, ITALY

(44°05'33" N., 9°49'30" E.) to:

Junction Points*

Port Said, U.A.R., 1,391
 Strait of Gibraltar, 891

Ports

Alexandria, U.A.R., 1,280
 Alger, Algeria, 540
 Alicante, Spain, 588
 Ancona, Italy, 979

Annaba, Algeria, 463

Banghazi, Libya, 876

Barcelona, Spain, 383

Bari, Italy, 775

Bayrut, Lebanon, 1,473

Bizerte, Tunisia, 414

Brindisi, Italy, 717

Cagliari, Sardinia, 336

Cartagena, Spain, 640

Castellamare di Stabia, Italy, 308

Ceuta, Morocco, 872

Gibraltar, 873

Haifa, Israel, 1,469

Iraklion, Crete, 956

Istanbul, Turkey (via Corinth Canal),
 1,214

Istanbul, Turkey (south of Greece),
 1,256

Izmir, Turkey (via Corinth Canal),
 1,060

Izmir, Turkey (south of Greece), 1,101

Malaga, Spain, 821

Marseille, France, 231

Messina, Sicily, 450

Napoli, Italy, 302

Odessa, U.S.S.R. (via Corinth Canal),
 1,562

Odessa U.S.S.R. (south of Greece),
 1,604

Oran, Algeria, 701

Palermo, Sicily, 395

Palma, Balearic Islands, 474

Piraeus, Greece (via Corinth Canal),
 860

Piraeus, Greece (south of Greece),
 942

Rijeka, Yugoslavia, 1,049

Sibenik, Yugoslavia, 923

Siracusa, Sicily, 521

Split, Yugoslavia, 908

Tarabulus, Libya, 790

Taranto, Italy, 669

Thessaloniki, Greece (via Corinth Canal),
 1,109

Thessaloniki, Greece (south of Greece),
 1,150

Toulon, France, 199

Trieste, Free Territory, 1,083

Tunis, Tunisia, 448

Valencia, Spain, 538

Valetta, Malta, 554

Venezia, Italy, 1,093

Volos, Greece (via Corinth Canal),
 1,050

Volos, Greece (south of Greece), 1,091

LA UNION, EL SALVADOR

(13°20'00" N., 87°49'00" W.) to:

Junction Points*

Panama, Panama, 748

Ports

Corinto, Nicaragua, 73
 Golfito, Costa Rica, 432
 La Libertad, Mexico, 1,875
 San Francisco, California, U.S.A.,
 2,586

LAE, NEW GUINEA

(6°44'30" S., 147°01'00" E.) to:

Ports

Apra, Guam, 1,315
 Brisbane, Australia, 1,560
 Noumea, New Caledonia, 1,519
 Port Moresby, Papua, 2,635
 Rabaul, New Britain, 448
 Wellington, New Zealand, 2,635

LAGOS, NIGERIA

(6°27'00" N., 3°23'00" E.) to:

Junction Points*

Strait of Gibraltar, 3,100
 Straits of Florida, 5,225
 Ushant, France, 3,746

Ports

Accra, Ghana, 229
 Baltimore, Maryland, U.S.A., 5,063
 Benguela, Angola, 1,289
 Boma, Republic of the Congo, 977
 Boston, Massachusetts, U.S.A., 4,774
 Calabar, Nigeria, 391
 Charleston, South Carolina, U.S.A.,
 5,065
 Clarence Bay, Ascension Island, 1,375
 Colon, Panama, 5,050
 Douala, Cameroon, 442
 Grand-Bassam, Ivory Coast, 556
 Longji, Cameroon, 463
 Marshall, Liberia, 894
 Mocamedes, Angola, 1,399
 Natal, Brazil, 2,425
 New York, New York, U.S.A., 4,883
 Norfolk, Virginia, U.S.A., 4,941
 Philadelphia, Pennsylvania, U.S.A.,
 4,935
 Pointe Noire, Gabon, 851
 Port Harcourt, Nigeria, 318
 Port of Spain, Trinidad, 3,950
 Porto Grande, Cape Verde Islands,
 1,991
 Santa Isabel, Fernando Poo, 384
 Sao Tome, Sao Tome, Gulf of Guinea,
 422
 Sassandra, Ivory Coast, 577
 Sekondi, Ghana, 317
 Tema, Ghana, 216
 Victoria, Cameroon, 410
 Willemstad, Curacao, 4,359

*JUNCTION POINT.—See Preface for use of junction points.

**LAKE CHARLES, LOUISIANA,
U.S.A.**

(30°13'30" N., 93°14'00" W.) to:

Junction Points*Straits of Florida, 677
Yucatan Channel, 689**Ports**Habana, Cuba, 750
Kingston, Jamaica, 1,190
Veracruz, Mexico, 688**LANDSKRONA, SWEDEN**

(55°52'08" N., 12°49'00" E.) to:

Junction Points*Kiel Canal (east end), Germany, 167
Skagens Odde, Denmark, 137**Ports**Oslo, Norway, 261
Stockholm, Sweden, 424
Szczecin, Poland, 170**LARACHE, MOROCCO**

(35°10'54" N., 6°08'54" W.) to:

Junction Points*Cape of Good Hope, Republic of
South Africa, 5,049
Ushant, France, 926**Ports**Dakar, Senegal, 1,425
Tangier, Morocco, 48**LARNACA, CYPRUS**

(34°54'44" N., 33°38'23" E.) to:

Junction Points*Port Said, U.A.R., 231
Strait of Gibraltar, 1,953**Ports**Al Ladhiqiyah, Syria, 114
Bayrut, Lebanon, 112
Constanta, Rumania, 962
Istanbul, Turkey, 766
Izmir, Turkey, 570
Jaffa, Israel, 181
Mersin, Turkey, 149
Nice, France, 1,457
Patrai, Greece (via Corinth Canal), 658
Patrai, Greece (via south of Greece), 750
Piraeus, Greece, 566

Pula, Yugoslavia (via Corinth Canal), 1,212

Pula, Yugoslavia (via south of Greece), 1,245

Rostov-na-Donu, U.S.S.R., 1,402

Sete, France, 1,579

Sfax, Tunisia, 1,163

Tarabulus, Libya, 1,050

Thessaloniki, Greece, 703

LARNAKA, CYPRUS. See Larnaca.**LARVIK, NORWAY**

(59°03'00" N., 10°01'35" E.) to:

Junction Points*

Pentland Firth, Scotland, 461

PortsBergen, Norway, 317
London, England, 604
Oslo, Norway, 72**LAS CALDERAS, DOMINICAN RE-
PUBLIC.** See Caldera Bay.**LAS PALMAS DE GRAN CANARIA,
CANARY ISLANDS**

(28°08'30" N., 15°25'00" W.) to:

Junction Points*Bishop Rock, England, 1,360
Strait of Gibraltar, 681
Straits of Florida, 3,713**Ports**Baltimore, Maryland, U.S.A., 3,251
Brunswick, Georgia, U.S.A., 3,442
Charleston, South Carolina, U.S.A., 3,341
Charlotte Amalie, Virgin Islands, 2,791
Freetown, Sierra Leone, 1,317
Funchal, Madeira Island, 282
Horta, Azores, 914
Jacksonville, Florida, U.S.A., 3,467
Lisboa, Portugal, 712
New York, New York, U.S.A., 2,965
Norfolk, Virginia, U.S.A., 3,130
Ponta Delgada, Azores, 774
Plymouth, England, 1,432
Recife, Brazil, 2,453
Savannah, Georgia, U.S.A., 3,409**LAS PIEDRAS, VENEZUELA**

(11°42'15" N., 70°13'15" W.) to:

PortsBoston, Massachusetts, U.S.A., 1,907
Maracaibo, Venezuela, 126
New York, New York, U.S.A., 1,796
Philadelphia, Pennsylvania, U.S.A., 1,786**LAUNCESTON, TASMANIA**

(41°27'00" S., 147°07'00" E.) to:

Junction Points*Cape Leeuwin, Australia, 1,577
Torres Strait, Australia, 2,278**Ports**Melbourne, Australia, 246
Sydney, Australia, 514
Wellington, New Zealand, 1,326**LAUTHALA HARBOR, FIJI****ISLANDS**

(18°10'00" S., 178°28'00" E.)

Use Suva distances.

LAUTOKA HARBOR, FIJI**ISLANDS**

(17°36'09" S., 177°26'16" E.) to:

Junction Points*Torres Strait, Australia, 2,204
Wilson Promontory, Australia, 2,070**Ports**Apra, Guam, 2,899
Sydney, Australia, 1,732
Wellington, New Zealand, 1,554**LE HAVRE, FRANCE**

(49°29'00" N., 0°06'00" E.) to:

Junction Points*Bishop Rock, England, 263
Kiel Canal (east end), Germany, 522
Skagens Odde, Denmark, 554
Ushant, France, 243**Ports**Aberdeen, Scotland, 522
Amsterdam, Netherlands, 273
Antwerpen, Belgium, 244
Belfast, Ireland, 542
Bergen, Norway, 702
Bremerhaven, Germany, 453
Dartmouth, England, 151
Dundee, Scotland, 505
Dunkerque, France, 144
Egersund, Norway, 589

*JUNCTION POINT.—See Preface for use of junction points.

Emden, Germany, 396
 Esbjerg, Denmark, 482
 Granville, France, 173
 Hamburg, Germany, 511
 Hartlepool, England, 386
 Hull, England, 326
 Kristiansand, Norway, 600
 Leith, Scotland, 503
 Liverpool, England, 510
 London, England, 205
 Narvik, Norway, 1,304
 Newcastle, England, 411
 Oostende, Belgium, 168
 Oslo, Norway, 752
 Plymouth, England, 177
 Rotterdam, Netherlands, 250
 St. Malo, France, 156
 Shoreham By Sea, England, 90
 Stavanger, Norway, 629
 Wilhelmshaven, Germany, 440
 Zeebrugge, Belgium, 186

LE VERDON, FRANCE. See Le Verdon-sur-Mer.

LE VERDON-SUR-MER, FRANCE
 (45°33'00'' N., 1°02'30'' W.)

Subtract 50 miles from Bordeaux distances.

LEGASPI, PHILIPPINES. See Port Legaspi.

LEGHORN, ITALY. See Livorno.

LEITH, SCOTLAND
 (55°59'00'' N., 3°10'30'' W.) to:

Junction Points*
 Bishop Rock, England, 708
 Skagens Odde, Denmark, 472
 Ushant, France, 696

Ports
 Amsterdam, Netherlands, 372
 Antwerpen, Belgium, 453
 Bergen, Norway, 386
 Blyth, England, 96
 Bremerhaven, Germany, 442
 Dunkerque, France, 399
 Egersund, Norway, 336
 Emden, Germany, 403
 Esbjerg, Denmark, 403
 Hamburg, Germany, 486
 Hull, England, 237
 Kristiansand, Norway, 394

Le Havre, France, 503
 London, England, 417
 Middlesbrough, England, 133
 Oostende, Belgium, 396
 Oslo, Norway, 546
 Plymouth, England, 619
 Portland, England, 545
 Portsmouth, England, 495
 Rotterdam, Netherlands, 381
 Seaham Harbor, England, 117
 Southampton, England, 513
 Stavanger, Norway, 346
 Wilhelmshaven, Germany, 435
 Zeebrugge, Belgium, 392

LEIXOES, PORTUGAL. See Porto de Leixoes.

LELE, CAROLINE ISLANDS
 (5°20'00'' N., 163°01'25'' E.) to:

Junction Points*
 Panama, Panama, 7,059

Ports
 Apia, Samoa, 1,895
 Apra, Guam, 1,206
 Brisbane, Australia, 2,097
 Honolulu, Hawaii, U.S.A., 2,467
 Midway Island, 1,773
 Noumea, New Caledonia, 1,722
 Omura, Bonin Islands, 1,772
 Pago Pago, American Samoa, 1,969
 San Francisco, California, U.S.A., 4,478
 Sydney, Australia, 2,503

LENINGRAD, U.S.S.R.
 (59°55'00'' N., 30°15'00'' E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 779
 Skagens Odde, Denmark (via The Sound), 841
 Skagens Odde, Denmark (via Store Baelt), 971

Ports
 Hango, Finland, 233
 Helsinki, Finland, 172
 Karlskrona, Sweden, 563
 Kobenhavn, Denmark, 917
 Musko Island, Sweden, 401
 Oslo, Norway (via Store Baelt), 1,095
 Oslo, Norway (via The Sound), 963
 Pitea, Sweden, 687
 Stockholm, Sweden, 386
 Sundsvall, Sweden, 507
 Tallinn, Estonia, 189

Umea, Sweden, 574
 Ventspils, Latvia, 374

LES CAYES, HAITI
 (18°10'00'' N., 73°45'00'' W.) to:

Junction Points*
 Panama, Panama, 688
 Straits of Florida, 738

Ports
 Baltimore, Maryland, U.S.A., 1,374
 Boston, Massachusetts, U.S.A., 1,630
 Colon, Panama, 645
 New York, New York, U.S.A., 1,447
 Philadelphia, Pennsylvania, U.S.A., 1,419
 Port au Prince, Haiti, 202

LESNOY, U.S.S.R.
 (66°40'42'' N., 34°22'00'' E.)

Add 49 miles to Arkhangelsk distances.

LEVUKA, FIJI ISLANDS
 (17°40'30'' S., 178°51'15'' E.) to:

Junction Points*
 Panama, Panama (via Ndaveta Namuka), 6,288
 Punt Arenas, Chile, 5,342
 Torres Strait, Australia (via Raine Island entrance), 2,268

Ports
 Apia, Samoa, 600
 Apra, Guam, 2,847
 Auckland, New Zealand, 1,175
 Avarua, Cook Islands, 1,268
 Brisbane, Australia, 1,569
 Callao, Peru, 6,002
 Hakodate, Japan, 4,271
 Hobart, Tasmania, 2,237
 Hong Kong, B.C.C. (west side of Santa Cruz Island), 4,574
 Honolulu, Hawaii, U.S.A., 2,730
 Melbourne, Australia, 2,274
 Midway Island, 2,833
 Nagasaki, Japan (via Tanegashima Kaikyo), 4,260
 Nonuti, Gilbert Islands, 1,162
 Noumea, New Caledonia (via Havanah Passage and Woodin Passage), 776
 Omura, Bonin Islands, 3,533
 Pago Pago, American Samoa, 643
 Papeete, Society Islands, 1,831
 Petropavlovsk, U.S.S.R., 4,518
 Ponape, Caroline Islands, 2,024

*JUNCTION POINT.—See Preface for use of junction points.

Rabaul, New Britain, 1,836
 Rotoava, Tuamotu Archipelago, 2,060
 San Francisco, California, U.S.A., 4,705
 Seattle, Washington, U.S.A., 5,120
 Selwyn Bay, Solomon Islands, 1,154
 Shang-hai, China, 4,528
 Sydney, Australia, 1,779
 Valparaiso, Chile, 5,753
 Yokohama, Japan, 4,015

LIBAU, LATVIA. See Liepaja.

LIBERTAD ANCHORAGE, MEXICO.
 See La Libertad.

LIBREVILLE, GABON
 (0°22'00'' N., 9°25'00'' E.) to:

Ports
 Dakar, Senegal, 1,982
 Douala, Cameroon, 228
 Pointe Noire, Gabon, 399

LICATA, SICILY, ITALY. See Porto di Licata.

LIEN-YUN, CHINA
 (34°44'30'' N., 119°27'30'' E.) to:

Ports
 Inchon, Korea, 389
 Nagasaki, Japan, 558
 Shang-hai, China, 414
 Ta-lien, China, 348

LIEPAJA, LATVIA
 (56°32'00'' N., 20°59'00'' E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 405
 Skagens Odde, Denmark (via Store Baelt), 597
 Skagens Odde, Denmark (via The Sound), 467

Ports
 Kolding, Denmark, 472
 Oslo, Norway (via Store Baelt), 721
 Oslo, Norway (via The Sound), 589
 Wismar, Germany, 379

LILLESAND, NORWAY
 (58°14'50'' N., 8°23'00'' E.) to:

Junction Points*
 Pentland Firth, Scotland, 390
 Skagens Odde, Denmark, 80

Ports
 Bergen, Norway, 241
 London, England, 533
 Oslo, Norway, 144

LIMASSOL, CYPRUS
 (34°40'00'' N., 33°03'00'' E.) to:

Junction Points*
 Port Said, U.A.R., 208
 Strait of Gibraltar, 1,914

Ports
 Alexandria, U.A.R., 272
 Iraklion, Crete, 405
 Izmir, Turkey, 530

LIMERICK, IRELAND
 (52°39'40'' N., 8°38'15'' W.) to:

Junction Points*
 Fastnet, Ireland, 157
 Inishtrahull, Ireland, 279
 Pentland Firth, Scotland, 538

Ports
 Belfast, Ireland (north of Ireland), 376
 Cobh, Ireland, 221

LIMHAMN, SWEDEN
 (55°35'30'' N., 12°55'40'' E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 159
 Skagens Odde, Denmark, 159

Ports
 Oslo, Norway, 279
 Stockholm, Sweden, 427
 Swinoujscie, Poland, 128

LIMIN KHIU, KHIOS, GREECE
 (38°22'00'' N., 26°08'20'' E.) to:

Junction Points*
 Port Said, U.A.R., 540
 Strait of Gibraltar, 1,239

Ports
 Iraklion, Crete, 193
 Piraievs, Greece, 162
 Volos, Greece, 193

LIMON, COSTA RICA
 (9°59'30'' N., 83°01'00'' W.) to:

Junction Points*
 Panama, Panama, 234
 Yucatan Channel, 732

Ports
 Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,974
 Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 2,230
 Brunswick, Georgia, U.S.A., 1,611
 Cartagena, Colombia, 447
 Castries, St. Lucia, 1,316
 Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,637
 Colon, Panama, 190
 Galveston, Texas, U.S.A., 1,394
 Georgetown, British Guiana, 1,647
 Habana, Cuba, 1,170
 Halifax, Canada, 2,368
 Hamilton, Bermuda (via Windward Passage), 1,715
 Jacksonville, Florida, U.S.A., 1,589
 Kingston, Jamaica, 605
 Mobile, Alabama, U.S.A. (via inside route), 1,292
 New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2,047
 Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,852
 Pensacola, Florida, U.S.A., 1,256
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 2,019
 Port of Spain, Trinidad, 1,313
 Puerto Cortes, Honduras, 623
 San Juan, Puerto Rico (via Mona Passage), 1,119
 Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,636
 Veracruz, Mexico, 1,338
 Wilmington, North Carolina, U.S.A., 1,680

LINDI, TANGANYIKA
 (9°59'54'' S., 39°44'03'' E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 2,155

Ports
 Beira, Mozambique, 832

*JUNCTION POINT.—See Preface for use of junction points.

Dar es Salaam, Tanganyika, 218
Mocambique, Mozambique, 356

LINGKAS, BORNEO, INDONESIA.
See Tarakan.

LINKAS, BORNEO, INDONESIA.
See Tarakan.

LISBOA, PORTUGAL

(38°42'00'' N., 9°08'00'' W.) to:
Junction Points*
Bishop Rock, England, 710
Cape of Good Hope, Republic of South Africa, 5,152
Inishtrahull, Ireland, 1,093
Montreal, Canada (via tracks C and D), 3,032
Montreal, Canada (via track E), 2,945
Montreal, Canada (via track F), 2,940
Pentland Firth, Scotland, 1,341
Punta Arenas, Chile, 6,398
Strait of Gibraltar, 286
Straits of Florida, 3,823
Ushant, France, 666

Ports
Argentia, Canada (track F), 2,081
Bathurst, Gambia, 1,632
Belem, Brazil, 3,251
Bordeaux, France, 733
Boston, Massachusetts, U.S.A. (track A), 2,838
Boston, Massachusetts, U.S.A. (track B), 2,817
Boston, Massachusetts, U.S.A. (track C), 2,793
Buenos Aires, Argentina, 5,339
Cadiz, Spain, 253
Cape Town, Republic of South Africa, 5,134
Casablanca, Morocco, 324
Castries, St. Lucia, 3,111
Charleston, South Carolina, U.S.A. (track B), 3,390
Charlotte Amalie, Virgin Islands, 3,147
Colon, Panama (via Mona Passage), 4,152
Dakar, Senegal, 1,544
El Ferrol del Caudillo, Spain, 356
Freetown, Sierra Leone, 2,023
Funchal, Madeira Island, 532
Georgetown, British Guiana, 3,264
Guantanamo, Cuba, 3,570
Halifax, Canada (track A), 2,526
Halifax, Canada (track B), 2,500
Halifax, Canada (tracks C and D), 2,475

Halifax, Canada (track E), 2,433
Halifax, Canada (track F), 2,437
Horta, Azores, 917
Huelva, Spain, 235
Jacksonville, Florida, U.S.A. (track A), 3,541
Key West, Florida, U.S.A., 3,765
Kingston, Jamaica, 3,725
Las Palmas de Gran Canaria, Canary Islands, 712
Marin, Spain, 255
Monrovia, Liberia, 2,225
New York, New York, U.S.A. (track A), 2,988
New York, New York, U.S.A. (track B), 2,978
New York, New York, U.S.A. (track C), 2,964
Norfolk, Virginia, U.S.A. (track A), 3,147
Norfolk, Virginia, U.S.A. (track B), 3,140
Norfolk, Virginia, U.S.A. (track C), 3,137
Philadelphia, Pennsylvania, U.S.A. (track A), 3,141
Philadelphia, Pennsylvania, U.S.A. (track B), 3,131
Philadelphia, Pennsylvania, U.S.A. (track C), 3,117
Ponta Delgada, Azores, 783
Port of Spain, Trinidad, 3,287
Porto, Portugal, 176
Porto de Leixoes, Portugal, 180
Porto Grande, Cape Verde Islands, 1,555
Praia, Azores, 850
Recife, Brazil, 3,156
Rio de Janeiro, Brazil, 4,219
San Juan, Puerto Rico, 3,185
Santa Cruz de Tenerife, Canary Islands, 714
Viana do Castelo, Portugal, 210
Vigo, Spain, 247
Villa do Porto, Azores, 771
Villagarcia, Spain, 264

LISBON, PORTUGAL. See Lisboa.

LITTLE CREEK, VIRGINIA, U.S.A.
(36°56'00'' N., 76°10'40'' W.)

Subtract 13½ miles from Norfolk distances.

LIVERPOOL, ENGLAND
(53°27'00'' N., 3°01'00'' W.) to:

Junction Points*
Bishop Rock, England, 297

Fastnet, Ireland, 295
Inishtrahull, Ireland (north of Isle of Man), 210
Pentland Firth, Scotland (via The Minch), 451
Pentland Firth, Scotland (south of Isle of Man), 460

Ports
Antwerpen, Belgium, 698
Ardrossan, Scotland, 180
Arkhangelsk, U.S.S.R., 2,075
Avonmouth, England, 282
Brest, France, 410
Cardiff, Wales, 267
Cherbourg, France, 442
Cobh, Ireland, 246
Douglas, Isle of Man, 68
Falmouth, England, 313
Holyhead, Wales, 72
Kingston, Jamaica, 1,744
LeHavre, France, 510
London, England, 659
Londonderry, Ireland, 215
Milford Haven, Wales, 197
Murmansk, U.S.S.R., 1,703
Newport, Wales, 284
Port Talbot, Wales, 244
Southampton, England, 479
Swansea, Wales, 236
Waterford, Ireland, 189

LIVERPOOL, CANADA
(44°02'30'' N., 64°42'00'' W.) to:

Ports
Boston, Massachusetts, U.S.A., 317
Colon, Panama, 2,244
Kingston, Jamaica, 1,744
New York, New York, U.S.A., 536
Norfolk, Virginia, U.S.A., 724
Philadelphia, Pennsylvania, U.S.A., 686
St. John, Canada, 212
San Juan, Puerto Rico, 1,540
Sydney, Canada, 293

LIVINGSTON, GUATEMALA
(15°50'30'' N., 88°43'00'' W.) to:

Junction Points*
Panama, Panama, 815

Ports
Mobile, Alabama, U.S.A., 942
New York, New York, U.S.A. (via Straits of Florida), 1,796
Norfolk, Virginia, U.S.A. 1,595

*JUNCTION POINT.—See Preface for use of junction points.

LIVORNO, ITALY

(43°33'06" N., 10°17'45" E.) to:

Junction Points*

Port Said, U.A.R., 1,355
 Strait of Gibraltar, 887

Ports

Alexandria, U.A.R., 1,244
 Alger, Algeria, 528
 Alicante, Spain, 585
 Ancona, Italy, 946
 Anaba, Algeria, 431
 Banghazi, Lybia, 841
 Barcelona, Spain, 386
 Bari, Italy, 739
 Bayrut, Lebanon, 1,437
 Beaulieu, France, 130
 Bizerte, Tunisia, 382
 Brindisi, Italy, 681
 Cagliari, Sardinia, 304
 Cannes, France, 149
 Cartagena, Spain, 636
 Catania, Sicily, 464
 Ceuta, Morocco, 868
 Civitavecchia, Italy, 120
 Gaeta, Italy, 228
 Gibraltar, 869
 Haifa, Israel, 1,433
 Iraklion, Crete, 920
 Istanbul, Turkey (via Corinth Canal), 1,178
 Istanbul, Turkey (south of Greece), 1,220
 Izmir, Turkey (via Corinth Canal), 1,024
 Izmir, Turkey (south of Greece), 1,066
 Malaga, Spain, 817
 Marseille, France, 236
 Messina, Sicily, 414
 Napoli, Italy, 267
 Nice, France, 134
 Odessa, U.S.S.R. (via Corinth Canal), 1,527
 Odessa, U.S.S.R. (south of Greece), 1,568
 Oran, Algeria, 691
 Palermo, Sicily, 359
 Palma, Balearic Islands, 470
 Piraeus, Greece (via Corinth Canal), 825
 Piraeus, Greece (south of Greece), 906
 Rijeka, Yugoslavia, 1,013
 Sete, France, 298
 Sibenik, Yugoslavia, 887
 Siracusa, Sicily, 486
 Split, Yugoslavia, 872
 Tarabulus, Libya, 754
 Taranto, Italy, 634
 Terracina, Italy, 212
 Thessaloniki, Greece (via Corinth Canal), 1,073

Thessaloniki, Greece (south of Greece), 1,114

Toulon, France, 204
 Trieste, Free Territory, 1,047
 Tunis, Tunisia, 417
 Valencia, Spain, 539
 Valletta, Malta, 519
 Venezia, Italy, 1,057
 Villefranche, France, 133
 Volos, Greece (via Corinth Canal), 1,014
 Volos, Greece (south of Greece), 1,056

LOANDA, ANGOLA. See Luanda.

LOBITO, ANGOLA

(12°20'00" S., 13°34'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 1,440
 Ushant, France, 4,670

Ports

Accra, Ghana, 1,356
 Luanda, Angola, 237
 Pointe Noire, Gabon, 473

LOCH EWE, SCOTLAND

(57°47'30" N., 5°38'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 119

Ports

Belfast, Ireland, 228
 Glasgow, Scotland, 303

LO-HSING-TA MAO-TI, CHINA

(25°59'00" N., 119°26'30" E.) to:

Junction Points*

Singapore, 1,817

Ports

Aleksandrovsk, U.S.S.R., 1,868
 Apra, Guam, 1,617
 Cebu, Philippines (via Balintang Channel), 1,051
 Ching-tao, China (via Steep Island Passage), 715
 Chin-huang-tao, China, 977
 Chinnampo, Korea, 879
 Hakodate, Japan, 1,429
 Hong Kong, B.C.C., 459
 Honolulu, Hawaii, U.S.A., 4,487
 Hsia-men, China, 200
 Iloilo, Philippines (via Balintang Channel), 1,073

Inchon, Korea, 818
 Kobe, Japan, 1,003
 Kuang-chou, China, 542
 Lu-shun, China, 876
 Manila, Philippines, 787
 Mokpo, Korea, 665
 Nagasaki, Japan, 691
 Petropavlovsk, U.S.S.R., 2,481
 Pusan, Korea, 762
 Shang-hai, China, 440
 Shan-tou, China, 309
 Shimonoseki, Japan, 799
 Ta-ku, China (via Steep Island Passage), 1,029
 Ta-lien, China, 871
 Tan-shui, Taiwan, 127
 Vladivostok, U.S.S.R., 1,264
 Wei-hai-wei, China (via Steep Island Passage), 801
 Wonsan, Korea, 1,068
 Yen-tai, China, 835
 Yokohama, Japan, 1,217

LOMBOK STRAIT, INDONESIA*

(8°50'00" S., 115°43'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,571
 Cape of Good Hope, Republic of South Africa, 5,461
 Singapore, 963
 Sunda Strait, Indonesia (north of Java), 677

Ports

Ambon, Indonesia, 819
 Balikpapan, Borneo, 472
 Ban Sattahip, Thailand, 1,620
 Bandjermasin, Borneo, 357
 Belawan, Indonesia, 1,342
 Bunbury, Australia, 1,510
 Calcutta, India, 2,614
 Calicut, India, 2,916
 Cebu, Philippines, 1,278
 Chinnampo, Korea, 2,946
 Cocanada, India, 2,567
 Darwin, Australia (south of Pulau Roti), 926
 Djakarta, Indonesia, 615
 Flying Fish Cove, Christmas Island, Indian Ocean, 603
 Fremantle, Australia, 1,440
 Geraldton, Australia, 1,242
 Hong Kong, B.C.C. (via Linapacan Strait), 2,029
 Iloilo, Philippines, 1,247
 Inchon, Korea, 2,885
 Kuching, Sarawak, 974
 Madras, India, 2,559
 Makasar, Celebes, 339
 Malacca, Malaysia, 1,091

*JUNCTION POINT.—See Preface for use of junction points.

Manila, Philippines (via Mindoro Strait, Cuyo West Pass, Sibutu Passage, and Makassar Strait), 1,514

Mokpo, Korea, 2,725

Port Kembla, Australia, 3,388

Port Legaspi, Philippines, 1,667

Port Refuge, Cocos Islands, 1,132

Sabang, Indonesia, 1,575

Sai Gon, Vietnam, 1,408

Semarang, Indonesia, 416

Shang-hai, China (via Pai-chieh Hsia, Steep Island Passage, east of Taiwan, Mindoro Strait, and Sibutu Passage), 2,577

Sukarnopura, Indonesia, 1,702

Surabaya, Indonesia (heavy draft, north of Madura), 275

Surabaya, Indonesia (light draft, south of Madura), 232

Tarakan, Borneo, 830

Tjilatjap, Indonesia, 413

Tjirebon, Indonesia, 503

Whyalla, Australia, 2,782

Zamboanga, Philippines, 1,047

LOME, TOGO

(6°07'00'' N., 1°13'30'' E.) to:

Ports

Monrovia, Liberia, 789

Pointe Noire, Gabon, 910

Santa Isabel, Fernando Poo, 480

Takoradi, Ghana, 200

LOMONOSOV, U.S.S.R.

(59°55'45'' N., 29°46'45'' E.)

Subtract 13½ miles from Leningrad distances.

LONDON, ENGLAND

(51°30'00'' N., 0°01'00'' E.) to:

Junction Points*

Bishop Rock, England, 413

Kiel Canal (east end), Germany, 439

Pentland Firth, Scotland, 536

Skagens Odde, Denmark, 554

Ushant, France, 397

Ports

Aberdeen, Scotland, 429

Alesund, Norway, 733

Amsterdam, Netherlands, 208

Antwerpen, Belgium, 193

Arendal, Norway, 551

Arkhangelsk, U.S.S.R., 2,061

Barrow in Furness, England, 665

Bergen, Norway, 613

Blyth, England, 318

Bremerhaven, Germany, 375

Cardiff, Wales, 526

Dartmouth, England, 292

Dundee, Scotland, 420

Dunkerque, France, 112

Egersund, Norway, 501

Emden, Germany, 318

Esbjerg, Denmark, 403

Falmouth, England, 351

Farsund, Norway, 497

Fishguard, Wales, 523

Flekkefjord, Norway, 479

Grimstad, Norway, 542

Hakonsvern, Norway, 616

Hamburg, Germany, 425

Hirtshals, Denmark, 541

Holyhead, Wales, 594

Hull, England, 240

Kragero, Norway, 582

Kristiansand, Norway, 514

Larvik, Norway, 604

Le Havre, France, 205

Leith, Scotland, 417

Lillesand, Norway, 533

Liverpool, England, 659

Mandal, Norway, 503

Methil, Scotland, 407

Middlesbrough, England, 293

Narvik, Norway, 1,215

Newcastle, England, 325

Oostende, Belgium, 123

Oslo, Norway, 650

Plymouth, England, 321

Portland, England, 247

Portsmouth, England, 197

Risor, Norway, 572

Rotterdam, Netherlands, 184

Sandefjord, Norway, 610

Seaham Harbor, England, 308

Shoreham By Sea, England, 161

Skien, Norway, 609

Sogndal, Norway, 641

Southampton, England, 215

Stavanger, Norway, 539

Stockholm, Sweden, 1,251

Sunderland, England, 312

Tonsberg, Norway, 624

Tvedestrand, Norway, 565

Wilhelmshaven, Germany, 362

Zeebrugge, Belgium, 131

LONDONDERRY, NORTHERN IRELAND

(55°00'00'' N., 7°19'00'' W.) to:

Junction Points*

Bishop Rock, England, 396

Fastnet, Ireland (west of Ireland), 371

Pentland Firth, Scotland, 310

Ports

Avonmouth, England, 384

Belfast, Ireland (via Rathlin Sound), 102

Cardiff, Wales, 369

Cobh, Ireland, 340

Dublin, Ireland, 189

Glasgow, Scotland, 145

Liverpool, England, 215

LONG BEACH, CALIFORNIA, U.S.A.

(33°46'12'' N., 118°13'18'' W.)

Use Los Angeles distances.

LONGJI, CAMEROON

(3°05'00'' N., 9°57'20'' E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,359

Ushant, France, 4,179

Ports

Lagos, Nigeria, 463

Matadi, Republic of the Congo, 731

LONGYEARBYEN, SVALBARD

(78°14'30'' N., 15°34'00'' E.) to:

Ports

Arkhangelsk, U.S.S.R., 1,051

Bergen, Norway, 1,124

Dikson Harbor, U.S.S.R., 1,148

Inverness, Scotland, 1,340

Kirkenes, Norway, 637

Murmansk, U.S.S.R., 695

Narvik, Norway, 659

Oslo, Norway, 1,482

Pechenga, U.S.S.R., 638

Reykjavik, Iceland (north of Iceland), 1,160

Reykjavik, Iceland (south of Iceland), 1,310

Tromso, Norway, 556

Trondheim, Norway, 943

Vardo, Norway, 586

LORIENT, FRANCE

(47°43'45'' N., 3°21'51'' W.) to:

Junction Points*

Bishop Rock, England, 202

Ushant, France, 107

Ports

Bilbao, Spain, 274

*JUNCTION POINT.—See Preface for use of junction points.

LOS ANGELES, CALIFORNIA, U.S.A.
(33°45'00" N., 118°16'15" W.) to:

Junction Points*

Panama, Panama, 2,913
Punta Arenas, Chile, 5,871
Singapore (via San Bernardino Strait), 7,867
Sunda Strait, Indonesia (via Makassar Strait), 7,976
Wilson Promontory, Australia, 6,879

Ports

Acapulco, Mexico, 1,501
Aleksandrovsk, U.S.S.R., 4,687
Antofagasta, Chile, 4,430
Apia, Samoa, 4,181
Archipelago de Colon, 2,634
Arica, Chile, 4,219
Auckland, New Zealand, 5,658
Avarua, Cook Islands, 4,064
Brisbane, Australia, 6,274
Butaritari, Gilbert Islands, 4,272
Callao, Peru, 3,655
Chinnampo, Korea, 5,711
Corinto, Nicaragua, 2,281
Dutch Harbor, Alaska, U.S.A., 2,382
Ensenada, Mexico, 151
Guayaquil, Ecuador, 3,218
Guaymas, Mexico, 1,158
Hakodate, Japan, 4,576
Hong Kong, B.C.C., 6,380
Honolulu, Hawaii, U.S.A., 2,228
Kobe, Japan, 5,185
Krung Thep, Thailand (via Balintang Channel), 7,775
La Libertad, Mexico, 1,315
Manila, Philippines (via San Bernardino Strait), 6,588
Manila, Philippines (north of Luzon), 6,530
Manzanilla, Mexico, 1,205
Mazatlan, Mexico, 1,011
Melbourne, Australia, 7,032
Mollendo, Peru, 4,094
Nagasaki, Japan, 5,572
Newcastle, Australia, 6,456
Nome, Alaska, U.S.A., 2,968
Noumea, New Caledonia, 5,521
Nukualofa, Tonga Islands, 4,633
Ocean Island, 4,553
Pago Pago, American Samoa, 4,163
Palmyra Island, 2,959
Papeete, Society Islands, 3,571
Pearl Harbor, Hawaii, U.S.A., 2,233
Petropavlovsk, U.S.S.R., 3,615
Prince Rupert, Canada, 1,432
Puerto Armuelles, Panama, 2,645
Puntarenas, Costa Rica, 2,499
Pusan, Korea, 5,229
Sai Gon, Vietnam (via San Bernardino Strait), 7,403

Salina Cruz, Mexico, 1,803
San Jose, Guatemala, 2,054
Santa Rosalia, Mexico, 1,192
Seward, Alaska, U.S.A., 2,045
Shang-hai, China, 5,810
Sitka, Alaska, U.S.A., 1,640
Surabaya, Indonesia (via Makassar Strait), 7,622
Suva, Fiji Islands, 4,788
Sydney, Australia, 6,511
Taio Hae, Marquesas, 2,858
Valparaiso, Chile, 4,808
Victoria, Canada, 1,091
Vladivostok, U.S.S.R., 4,981
Wellington, New Zealand, 5,857
Wonsan, Korea, 5,181
Yokohama, Japan, 4,839

LOTA, CHILE

(37°05'40" S., 73°09'40" W.) to:

Junction Points*

Panama, Panama, 2,825
Punta Arenas, Chile, 1,191

Ports

Acapulco, Mexico, 3,573
Antofagasta, Chile, 828
Arica, Chile, 1,134
Caldera, Chile, 628
Callao, Peru, 1,530
Coquimbo, Chile, 455
Corinto, Nicaragua, 3,081
Corral, Chile, 195
Esmeraldas, Ecuador, 2,388
Guayaquil, Ecuador, 2,155
Guaymas, Mexico, 4,442
Iquique, Chile, 1,033
Mollendo, Peru, 1,209
Monterey, California, U.S.A., 5,202
Pisco, Peru, 1,432
Puntarenas, Costa Rica, 2,899
Salina Cruz, Mexico, 3,430
San Blas, Mexico, 3,990
San Diego, California, U.S.A., 4,881
San Francisco, California, U.S.A., 5,282
San Jose, Guatemala, 3,220
Santa Barbara, California, U.S.A., 5,018
Talcahuano, Chile, 50
Valparaiso, Chile, 268

LOURENCO MARQUES, MOZAMBIQUE

(25°58'30" S., 32°34'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 1,057

Port Said, U.A.R., 4,348
Singapore, 4,769

Ports

Aden, Aden Protectorate, 2,973
Antsirana, Malagasy Republic, 1,313
Beira, Mozambique, 476
Belawan, Indonesia, 4,436
Darwin, Australia, 5,539
Durban, Republic of South Africa, 307
Fremantle, Australia, 4,283
Inhambane, Mozambique, 253
Majunga, Malagasy Republic, 1,034
Malacca, Malaysia, 4,654
Mombasa, Kenya, 1,508
Penang, Malaysia, 4,481
Port Louis, Mauritius, 1,448
Sabang, Indonesia, 4,170
St. Denis, Reunion Island, 1,325
Tamatave, Malagasy Republic, 1,242
Zanzibar, Zanzibar, 1,388

LUANDA, ANGOLA

(8°47'00" S., 13°15'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 1,627

Ports

Boma, Republic of the Congo, 190
Cape Town, Republic of South Africa, 1,601
Clarence Bay, Ascension Island, 1,657
Lobito, Angola, 237
New York, New York, U.S.A., 5,670
Pointe Noire, Gabon, 266
Port Harcourt, Nigeria, 941
Porto Grande, Cape Verde Islands, 2,778

LUBECK, GERMANY

(53°52'44" N., 10°41'27" E.) to:

Junction Points*

Kiel Canal (east end), Germany
Skagens Odde, Denmark, 263

Ports

Aalborg, Denmark (via Store Baelt), 248
Abenra, Denmark, 131
Assens, Denmark, 127
Faborg, Denmark, 102
Flensburg, Germany, 131
Fredericia, Denmark, 155
Frederikshavn, Denmark, 155
Gdynia, Poland, 328
Grena, Denmark, 169
Haderslev, Denmark, 137

*JUNCTION POINT.—See Preface for use of junction points.

Hobro, Denmark, 235
 Kobenhavn, Denmark, 148
 Middlefart, Denmark, 149
 Naestved, Denmark, 136
 Stockholm, Sweden, 491
 Vejle, Denmark, 173

LUCINDA, AUSTRALIA
 (18°31'15" S., 146°20'00" E.) to:

Junction Points*
 Torres Strait, Australia, 634
 Wilson Promontory, Australia, 1,621

Ports
 Brisbane, Australia, 804
 Wellington, New Zealand, 2,102

LUDEWITZ BAY, SOUTHWEST AFRICA
 (26°38'00" S., 15°08'30" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 511

Ports
 Baltimore, Maryland, U.S.A., 6,538
 Belem, Brazil, 4,076
 Boston, Massachusetts, U.S.A., 6,302
 Cape Town, Republic of South Africa, 479
 New York, New York, U.S.A., 6,393
 Philadelphia, Pennsylvania, U.S.A., 6,477
 Walvisbaai, Southwest Africa, 240

LULEA, SWEDEN
 (65°34'30" N., 22°10'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 875
 Skagens Odde, Denmark (via Store Baelt), 1,067
 Skagens Odde, Denmark (via The Sound), 941

Ports
 Oslo, Norway (via Store Baelt), 1,195
 Oslo, Norway (via The Sound), 1,063

LU-SHUN, CHINA
 (38°48'00" N., 121°15'00" E.) to:

Junction Points*
 Singapore, 2,623

Ports
 Aleksandrovsk, Sakhalin, U.S.S.R., 1,654
 Apra, Guam (via Tokara Kaikyo), 1,976
 Cebu, Philippines (via San Bernardino Strait), 1,754
 Ching-tao, China, 280
 Chin-huang-tao, China, 113
 Chinnampo, Korea, 201
 Djakarta, Indonesia, 2,935
 Hakodate, Japan, 1,244
 Hong Kong, B.C.C., 1,265
 Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,524
 Hsia-men, China, 1,006
 Iloilo, Philippines, 1,776
 Inchon, Korea, 302
 Kobe, Japan, 881
 Kuang-chou, China, 1,348
 Lo-hsing-ta Mao-ti, China (via Steep Island Passage), 876
 Manila, Philippines (east of Taiwan and Boca Chica), 1,573
 Manila, Philippines (via Formosa Strait), 1,583
 Mokpo, Korea, 383
 Nagasaki, Japan, 601
 Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kuril'skiy, La Perouse Strait and Maenggol Sudo), 2,267
 Petropavlovsk, U.S.S.R. (via Osumi Kaikyo), 2,588
 Pusan, Korea (via Maenggol Sudo), 549
 San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,477
 San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,700
 Shang-hai, China (via South Channel), 558
 San-tou, China, 1,115
 Shimonoseki, Japan, 637
 Ta-ku, China, 175
 Tan-shui, Taiwan, 859
 Vladivostok, U.S.S.R., 1,050
 Wonsan, Korea, 854
 Yokohama, Japan, 1,181

LYTTELTON, NEW ZEALAND
 (43°36'25" S., 172°43'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 2,792
 Torres Strait, Australia, 2,849

Ports
 Melbourne, Australia, 1,518
 Port Augusta, Australia, 2,082
 Sydney, Australia, 1,419
 Wellington, New Zealand, 174

MAASSLUIS, NETHERLANDS
 (51°55'45" N., 4°15'12" E.)

Subtract 8½ miles from Rotterdam distances.

MACAO, CHINA. See Macau.

MACAU, CHINA
 (22°10'40" N., 113°34'50" E.) to:

Ports
 Chi-lung Chiang, Taiwan, 516
 Kagoshima, Japan, 1,114
 Kao-hsiung Chiang, Taiwan, 329
 Manila, Philippines, 654
 Shang-hai, China, 903

MACEIO, BRAZIL
 (9°41'00" S., 35°44'00" W.) to:

Junction Points*
 Punta Arenas, Chile, 3,138

Ports
 Belem, Brazil, 1,211
 Rio de Janeiro, Brazil, 972
 Salvador, Brazil, 285

MACKAY, AUSTRALIA
 (21°09'15" S., 149°14'00" E.) to:

Junction Points*
 Torres Strait, Australia, 864

Ports
 Brisbane, Australia, 512
 Noumea, New Caledonia, 1,253
 Port Moresby, Papua, 1,168
 Rabaul, New Britain, 1,871

MACKENZIE, BRITISH GUIANA
 (6°00'00" N., 58°17'00" W.)

Add 66 miles to Georgetown distances.

MADEIRA. See Funchal.

MADRAS, INDIA
 (13°06'00" N., 80°18'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 3,480
 Cape of Good Hope, Republic of South Africa (November–March, east of Madagascar and west of Reunion Island), 4,844

*JUNCTION POINT.—See Preface for use of junction points.

Cape of Good Hope, Republic of South Africa (May–September, east of Madagascar and Reunion Island), 4,852

Cape of Good Hope, Republic of South Africa (April and October, west of Madagascar), 4,947

Lombok Strait, Indonesia, 2,559

Port Said, U.A.R. (October–April, south of Socotra), 4,048

Port Said, U.A.R. (May–September, south of Socotra), 4,169

Port Said, U.A.R. (alternate, May–September, north of Socotra), 4,161

Port Said, U.A.R. (low power, May–September, south of Socotra), 4,229

Singapore, 1,583

Ports

Aden, Aden Protectorate (October–April, south of Socotra), 2,661

Aden, Aden Protectorate (May–September, south of Socotra), 2,782

Aden, Aden Protectorate (alternate, May–September, north of Socotra), 2,771

Aden, Aden Protectorate (low power, May–September, south of Socotra), 2,842

Belawan, Indonesia, 1,252

Bombay India, 1,482

Calcutta, India, 769

Cocanada, India, 276

Colombo, Ceylon, 611

Darwin, Australia, 3,483

Fremantle, Australia, 3,389

Johore Bahru, Malaysia, 1,586

Karachi, Pakistan, 1,908

Malacca, Malaysia, 1,470

Moulmein, Burma, 1,043

Penang, Malaysia, 1,285

Port Blair, Andaman Islands, 758

Port Swettenham, Malaysia, 1,384

Rangoon, Burma, 1,003

Sabang, Indonesia, 994

Visakhapatnam, India, 332

MAGADAN, U.S.S.R. See Nagayevu.

MAGALLANES, CHILE. See Punta Arenas.

MAGDALENA BAY, MEXICO. See Bahia Magdalena.

MAHE, SEYCHELLES. See Victoria.

MAHON, BALEARIC ISLANDS
(39°53'20" N., 4°16'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,484

Strait of Gibraltar, 552

Ports

Alger, Algeria, 200

Barcelona, Spain, 144

Marseille, France, 219

MAIZURU, JAPAN
(35°31'00" N., 135°20'00" E.) to:

Ports

Akita, Japan, 352

Changjon, Korea, 411

Chongjin, Korea, 463

De-Kastri, U.S.S.R., 1,006

Hakodate, Japan, 460

Kimchaek, Korea, 431

Nanao, Japan, 213

Niigata, Japan, 256

Pohang, Korea, 313

Pusan, Korea, 333

Sakata, Japan, 314

Shang-hai, China, 800

Shimonoseki, Japan, 302

Sosura, Korea, 469

Ulsan, Korea, 315

Unggi, Korea, 474

Vladivostok, U.S.S.R., 485

Wakamatsu, Japan, 299

MAJUNGA, MALAGASY REPUBLIC
(15°44'00" S., 46°18'00" E.) to:

Junction Points*

Port Said, U.A.R., 3,471

Singapore, 3,845

Ports

Beira, Mozambique, 732

Belawan, Indonesia, 3,512

Darwin, Australia, 5,069

Fremantle, Australia, 4,132

Lourenco Marques, Mozambique, 1,034

Malacca, Malaysia, 3,710

Penang, Malaysia, 3,557

Sabang, Indonesia, 3,246

Tulear, Malagasy Republic, 625

MAKASAR, CELEBES
(5°08'00" S., 119°24'00" E.) to:

Junction Points*

Lombok Strait, Indonesia, 339

Panama, Panama (via Selat Salajar and Selat Sagewin), 9,855

Singapore (via Selat Riouw), 1,070
Sunda Strait, Indonesia, 861
Wetar Passage, Indonesia, 614

Ports

Ban Sattahip, Thailand, 1,753

Bandjermasin, Borneo, 399

Belawan, Indonesia, 1,439

Davao, Philippines, 929

Manila, Philippines (via Mindoro Strait and Sibutu Passage), 1,232

Mokpo, Korea, 2,483

Seletar, Malaysia, 1,071

Semarang, Indonesia, 596

Sihanoukville, Cambodia, 1,584

Sorido, Indonesia, 1,180

Sorong, New Guinea, 872

Tandjung Uban, Indonesia, 1,075

Tjirebon, Indonesia, 156

Tso-ying, Taiwan, 1,757

MAKASSAR, CELEBES. See Makassar.

MALACCA, MALAYSIA
(2°10'00" N., 102°14'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,464

Lombok Strait, Indonesia, 1,091

Port Said, U.A.R., 4,906

Singapore, 117

Sunda Strait, Indonesia, 619

Torres Strait, Australia, 2,588

Ports

Aden, Aden Protectorate, 3,517

Al Bahrayn, Bahrain, 3,534

Al Basra, Iraq, 3,771

Al Kuwayt, Kuwait, 3,718

Albany, Australia, 2,602

Antsirana, Malagasy Republic, 3,439

Beira, Mozambique, 4,405

Belawan, Indonesia, 253

Berbera, Somali Republic, 3,531

Bombay, India, 2,327

Bushehr, Iran, 3,590

Calcutta, India, 1,523

Calicut, India, 1,827

Cocanada, India, 1,478

Colombo, Ceylon, 1,458

Dar es Salaam, Tanganyika, 3,927

Diego Garcia, Chagos Archipelago, 2,078

Djakarta, Indonesia, 613

Durban, Republic of South Africa, 4,757

East London, Republic of South Africa, 4,967

*JUNCTION POINT.—See Preface for use of junction points.

Fort Dauphin, Malagasy Republic, 3,860
 Karachi, Pakistan, 2,768
 Lourence Marques, Mozambique, 4,654
 Madras, India, 1,470
 Majunga, Malagasy Republic, 3,730
 Masqat, Mascot and Oman, 3,017
 Moçambique, Mozambique, 3,965
 Mombasa, Kenya, 3,872
 Mosselbaai, Republic of South Africa, 5,269
 Penang, Malaysia, 252
 Port Elizabeth, Republic of South Africa, 5,094
 Port Louis, Mauritius, 3,215
 Rangoon, Burma, 986
 Sabang, Indonesia, 486
 Saint Denis, Reunion Island, 3,330
 Surabaya, Indonesia, 881
 Tamatave, Malagasy Republic, 3,560
 Victoria, Seychelles, 2,952
 Zanzibar, Zanzibar, 3,945

MALAGA, SPAIN

(36°42'44" N., 4°25'00" W.) to:

Junction Points*

Port Said, U.A.R., 1,873
 Strait of Gibraltar, 78

Ports

Alexandria, U.A.R., 1,752
 Alger, Algeria, 368
 Alicante, Spain, 248
 Ancona, Italy, 1,510
 Annaba, Algeria, 607
 Banghazi, Libya, 1,286
 Barcelona, Spain, 464
 Bari, Italy, 1,303
 Bayrut, Lebanon, 1,964
 Bizerte, Tunisia, 699
 Brindisi, Italy, 1,245
 Cartagena, Spain, 189
 Catania, Sicily, 1,012
 Derince, Turkey (via Corinth Canal), 1,768
 Derince, Turkey (south of Greece), 1,785
 Genova, Italy, 798
 Ghazaouet, Algeria, 158
 Haifa, Israel, 1,961
 Iraklion, Crete, 1,446
 Istanbul, Turkey (via Corinth Canal), 1,735
 Istanbul, Turkey (south of Greece), 1,752
 Izmir, Turkey (via Corinth Canal), 1,580
 Izmir, Turkey (south of Greece), 1,597

La Spezia, Italy, 821
 Livorno, Italy, 817
 Marseille, France, 641
 Melilla, Morocco, 116
 Mers el Kebir, Algeria, 194
 Messina, Sicily, 979
 Napoli, Italy, 932
 Odessa, U.S.S.R. (via Corinth Canal), 2,083
 Odessa, U.S.S.R. (south of Greece), 2,100
 Oran, Algeria, 195
 Palermo, Sicily, 870
 Palma, Balearic Islands, 401
 Piraeus, Greece (via Corinth Canal), 1,381
 Piraeus, Greece (south of Greece), 1,438
 Rijeka, Yugoslavia, 1,578
 Savona, Italy, 783
 Sibenik, Yugoslavia, 1,452
 Siracusa, Sicily, 985
 Split, Yugoslavia, 1,436
 Tarabulus, Libya, 1,024
 Taranto, Italy, 1,198
 Tarragona, Spain, 431
 Thessaloniki, Greece (via Corinth Canal), 1,629
 Thessaloniki, Greece (south of Greece), 1,646
 Toulon, France, 652
 Trieste, Free Territory, 1,611
 Valencia, Spain, 334
 Valletta, Malta, 928
 Venezia, Italy, 1,621
 Villa Sanjurjo, Morocco, 93
 Volos, Greece (via Corinth Canal), 1,570
 Volos, Greece (south of Greece), 1,587

MALAKAL, PALAU ISLANDS

(7°20'00" N., 134°26'30" E.) to:

Junction Points*

Panama, Panama, 8,674
 Singapore (via Basilan Strait), 2,006

Ports

Apia, Samoa, 3,446
 Apra, Guam, 706
 Brisbane, Australia, 2,642
 Honolulu, Hawaii, U.S.A., 3,997
 Kodiak, Alaska, U.S.A., 4,579
 Manila, Philippines (via Verde Island Passage and San Bernardino Strait), 1,044
 Noumea, New Caledonia, 2,612
 Ponape, Caroline Islands, 1,418
 Sai Gon, Vietnam, 1,801
 Surabaya, Indonesia, 1,656

Suva, Fiji Islands, 3,041
 Yokohama, Japan, 1,731

MALDONADO, URUGUAY

(34°56'00" S., 55°00'00" W.) to:

Junction Points*

Panama, Panama, 5,352
 Punta Arenas, Chile, 1,321

Ports

Santos, Brazil, 1,172
 Stanley, Falkland Islands, 1,023

MALMO, SWEDEN

(55°37'00" N., 13°00'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany (via Store Baelt), 205
 Skagens Odde, Denmark, 155

Ports

Oslo, Norway, 278
 Stockholm, Sweden (via Drogen Channel), 435
 Stockholm, Sweden (via Flint Channel), 422

MALTA. See Valletta, Malta.

MALTEPE, TURKEY

(40°54'00" N., 29°08'00" E.)

Add 5 miles to Istanbul distances for ports outside of the Black Sea and Sea of Marmara.

MANAKARA, MALAGASY**REPUBLIC**

(22°08'20" S., 48°01'19" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 1,779
 Port Said, U.A.R., 3,842

Ports

Beira, Mozambique, 974
 Mocambique, Mozambique, 1,197
 Tulear, Malagasy Republic, 467

MANAMA, BAHRAIN. See Al Bahrayn.

*JUNCTION POINT.—See Preface for use of junction points.

MANAUS, BRAZIL

(3°08'00" S., 60°01'00" W.)

Add 920 miles to Belem distances.

MANCHESTER, ENGLAND

(53°29'00" N., 2°14'00" W.)

Add 39 miles to Liverpool distances.

MANDAL, NORWAY

(58°01'30" N., 7°27'20" E.) to:

Junction Points*

Pentland Firth, Scotland, 351
Skagens Odde, Denmark, 110

Ports

Bergen, Norway, 201
London, England, 503
Oslo, Norway, 177

MANFREDONIA, ITALY. See Porto
Di Manfredonia.

MANILA, PHILIPPINES

(14°35'00" N., 120°58'00" E.) to:

Junction Points*

Lombok Strait, Indonesia (via Apo East Pass, Mindoro Strait, Sibutu Passage, and Makassar Strait), 1,514
Lombok Strait, Indonesia (via Apo West Pass, Mindoro Strait, Sibutu Passage, and Makassar Strait), 1,474
Panama, Panama (north of Luzon), 9,347
Panama, Panama (via San Bernardino Strait), 9,370
Singapore (north of North Danger Reef), 1,330
Sunda Strait, Indonesia (via Palawan Passage and Selat Gaspar), 1,578
Torres Strait, Australia (via Verde Islands and Djailolo Passage), 2,168
Torres Strait, Australia (via Basilan and Mindoro Straits), 2,193
Torres Strait, Australia (via San Bernardino Strait), 2,239

Ports

Aleksandrovsk, U.S.S.R., 2,507
Ambon, Indonesia, 1,260
Apra, Guam (via San Bernardino Strait), 1,499

Apra, Guam (north of Luzon), 1,742
Balikpapan, Borneo (via Mindoro Strait, Sibutu Passage and Makassar Strait), 1,057
Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 391
Chimu Wan, Ryukyu Islands, 947
Ching-tao, China, 1,422
Chinnampo, Korea, 1,559
Da Nang, Vietnam, 758
Darwin, Australia (via Mindoro Strait, Basilan Strait, Selat Bangka, and Selat Minipa), 1,834
Davao, Philippines, 831
Djakarta, Indonesia (via Palawan Passage), 1,559
Dutch Harbor, Alaska, U.S.A. (north of Luzon), 4,233
Guayaquil, Ecuador, 9,615
Hai-kou, Hai-nan Tao, 720
Haiphong, Vietnam (south of Hai-nan Tao), 936
Hakodate, Japan, 2,066
Hong Kong, B.C.C., 631
Honolulu, Hawaii, U.S.A. (via San Bernardino Strait), 4,767
Honolulu, Hawaii, U.S.A. (north of Luzon), 4,869
Hsia-men, China, 662
Hua-lien Chiang, Taiwan, 648
Iloilo, Philippines (via Verde Island Passage and Jintotolo Channel), 361
Inchon, Korea, 1,498
Jolo, Philippines (via West Apo Channel), 550
Kiska, Alaska, U.S.A., 3,664
Kobe, Japan (via Balintang Channel), 1,563
Kodiak, Alaska, U.S.A., 4,823
Krung Thep, Thailand, 1,435
Kuang-chou, China, 714
Lo-hsing-ta Mao-ti, China, 787
Los Angeles, California, U.S.A. (via north of Luzon), 6,530
Los Angeles, California, U.S.A. (via San Bernardino Strait), 6,588
Lu-shun, China (east of Taiwan), 1,573
Lu-shun, China (via Formosa Strait), 1,583
Macau, China, 654
Makasar, Celebes (via Mindoro Strait and Sibutu Passage), 1,232
Malakal, Palau Islands (via Verde Island Passage and San Bernardino Strait), 1,044
Midway Island (north of Luzon), 3,752
Midway Island (via San Bernardino Strait), 3,685
Moji, Japan, 1,436

Mokpo, Korea, 1,338
Nagasaki, Japan, 1,298
Nakagusuku, Ryukyu Islands, 935
Nha Trang Bay, Vietnam, 706
Nome, Alaska, U.S.A., 4,379
Noumea, New Caledonia, 3,616
Pago Pago, American Samoa (via San Bernardino Strait), 4,519
Palmyra Island, 4,675
Papeete, Society Islands, 5,728
Peng-hu Chiang, Taiwan, 606
Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilsky and La Perouse Strait), 3,117
Port Legaspi, Philippines, 370
Portland, Oregon, U.S.A., 6,024
Prince Rupert, Canada (north of Luzon, and south of Aleutian Islands), 5,546
Prince Rupert, Canada (via alternate route, north of Aleutian Islands), 5,493
Pulupandan, Philippines, 363
Pusan, Korea, 1,402
Rabaul, New Britain, 2,281
Sai Gon, Vietnam, 907
San Diego, California, U.S.A., 6,604
San Fernando, Philippines, 207
San Francisco, California, U.S.A. (via Balintang Channel), 6,221
San Francisco, California (via San Bernardino Strait), 6,299
San-ya Chiang, China, 714
Sasebo, Japan, 1,349
Seattle, Washington, U.S.A. (north of Luzon), 5,959
Seattle, Washington, U.S.A. (via San Bernardino Strait), 6,077
Seletar, Malaysia, 1,333
Seward, Alaska, U.S.A. (north of Luzon and south of Aleutian Islands), 5,046
Shang-hai, China (via Formosa Strait), 1,166
Shang-hai, China (east of Taiwan), 1,156
Shan-tou, China, 623
Shimonoseki, Japan, 1,424
Sitka, Alaska, U.S.A. (south of Aleutian Islands), 5,370
Sitka, Alaska, U.S.A. (north of Aleutian Islands), 5,302
Su-ao Chiang, Taiwan, 684
Surabaya, Indonesia, 1,540
Suva, Fiji Islands, 4,048
Ta-ku, China (east of Taiwan), 1,722
Ta-ku, China (via Formosa Strait), 1,732
Ta-lien, China (east of Taiwan), 1,561
Ta-lien, China (via Formosa Strait), 1,571

*JUNCTION POINT.—See Preface for use of junction points.

Tandjung Uban, Indonesia, 1,328
 Tan-shui, Taiwan, 742
 Tarakan, Indonesia, 785
 Teluk Kau, Halmahera, 1,049
 Truk, Caroline Islands, 1,994
 Tso-Ying, Taiwan, 552
 Valparaiso, Chile (via San Bernardino Strait), 9,710
 Vinh Cam Ranh, Vietnam, 710
 Vladivostok, U.S.S.R., 1,912
 Wake Island, Pacific, 2,772
 Wei-hai-wei, China (east of Taiwan), 1,498
 Wei-hai-wei, China (via Formosa Strait), 1,508
 Wonsan, Korea, 1,708
 Wotje Island, Marshall Islands, 3,027
 Yap, Caroline Islands, 1,154
 Yen-tai, China (east of Formosa), 1,532
 Yokohama, Japan (via Balintang Channel), 1,758
 Yu-lin Chiang, Hainan-tao, China, 713
 Zamboanga, Philippines (via East Apo Channel), 532

MANZANILLO, CUBA
 (20°21'00" N., 77°09'00" W.) to:

Junction Points*
 Panama, Panama, 732
 Yucatan Channel, 432

Ports
 Charleston, South Carolina, U.S.A., 1,105
 Cienfuegos, Cuba, 266
 Colon, Panama, 689
 Guantanamo, Cuba, 206
 Hamilton, Bermuda, 1,187
 Kingston, Jamaica, 283
 Port au Prince, Haiti, 372
 San Juan, Puerto Rico, 738
 Santiago de Cuba, Cuba, 168
 Santo Domingo, Dominican Republic, 558
 Willemstad, Curacao, 746

MANZANILLO, MEXICO
 (19°03'30" N., 104°19'50" W.) to:

Ports
 Acapulco, Mexico, 295
 Los Angeles, California, U.S.A., 1,205
 Mazatlan, Mexico, 297
 San Diego, California, U.S.A., 1,136
 San Francisco, California, U.S.A., 1,538
 San Jose, Guatemala, 840

MAOKA, SAKHALIN. See Kholmsk

MARACAIBO, VENEZUELA
 (10°38'00" N., 71°37'00" W.) to:

Junction Points*
 Montreal, Canada, 2,931
 Panama, Panama, 737
 Straits of Florida (via Windward Passage), 1,205
 Yucatan Channel, 1,096

Ports
 Baltimore, Maryland, U.S.A. (via Windward Passage), 1,804
 Boston, Massachusetts, U.S.A., 2,001
 Cartagena, Colombia, 465
 Charleston, South Carolina, U.S.A., 1,467
 Colon, Panama, 693
 Galveston, Texas, U.S.A., 1,810
 Habana, Cuba, 1,173
 Las Piedras, Venezuela, 126
 New Orleans, Louisiana, U.S.A. (via South Pass), 1,629
 New York, New York, U.S.A., 1,890
 Norfolk, Virginia, U.S.A., 1,682
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage), 1,849
 Portland, Maine, U.S.A., 2,042
 Puerto Padre, Cuba, 834
 Santo Domingo, Dominican Republic, 496
 Savannah, Georgia, U.S.A., 1,466
 Willemstad, Curacao, 222

MAR DEL PLATA, ARGENTINA
 (38°02'00" S., 57°31'00" W.) to:

Junction Points*
 Panama, Panama, 5,543
 Punta Arenas, Chile, 1,112

Ports
 Buenos Aires, Argentina, 276
 Santos, Brazil, 1,363

MARANHAO, BRAZIL. See Sao Luis.

MARCUS HOOK, PENNSYLVANIA, U.S.A.
 (39°48'12" N., 75°25'12" W.)

Subtract 18 miles from Philadelphia distances.

MARE ISLAND, CALIFORNIA, U.S.A.
 (38°36'00" N., 122°16'00" W.)

Add 22 miles to San Francisco distances.

MARGARITA, VENEZUELA. See Porlamar.

MARIEL, CUBA
 (23°00'00" N., 82°45'15" W.) to:

Junction Points*
 Straits of Florida, 86
 Yucatan Channel, 164

Ports
 Kingston, Jamaica, 716
 Nuevitas, Cuba, 366
 San Juan, Puerto Rico, 999
 Swan Island, 437

MARIN, PONTE VEDRA BAY, SPAIN
 (42°24'00" N., 8°43'00" W.) to:

Junction Points*
 Strait of Gibraltar, 517
 Ushant, France, 437

Ports
 Bilbao, Spain, 387
 Horta, Azores, 944
 Lisboa, Portugal, 255

MARMAGAO, INDIA. See Mormugao.

MARSALA, SICILY, ITALY
 (37°46'45" N., 12°26'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,081
 Strait of Gibraltar, 881

Ports
 Napoli, Italy, 214
 Tunis, Tunisia, 124
 Valletta, Malta, 157

MARSAXLOKK, MALTA
 (35°48'54" W., 14°33'06" E.) to:

Junction Points*
 Port Said, U.A.R., 942
 Strait of Gibraltar, 1,017

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Messina, Sicily, 164
 Tarabulus, Libya, 191
 Tunis, Tunisia, 246

MARSEILLE, FRANCE
 (43°19'10" N., 5°21'17" E.) to:

Junction Points*
 Port Said, U.A.R., 1,518
 Strait of Gibraltar, 711

Ports
 Ajaccio, Corsica, 188
 Alcudia, Balearic Islands, 235
 Alexandria, U.A.R., 1,407
 Alger, Algeria, 410
 Alicante, Spain, 406
 Ancona, Italy, 1,109
 Annaba, Algeria, 409
 Banghazi, Libya, 1,004
 Baniyas, Syria, 1,610
 Barcelona, Spain, 189
 Bari, Italy, 902
 Batumi, U.S.S.R. (via Corinth Canal), 1,929
 Batumi, U.S.S.R. (south of Greece), 1,970
 Bayrut, Lebanon, 1,600
 Bizerte, Tunisia, 428
 Bonifacio, Corsica, 213
 Brindisi, Italy, 844
 Cagliari, Sardinia, 360
 Cartagena, Spain, 460
 Catania, Sicily, 627
 Ceuta, Morocco, 692
 Civitavecchi, Italy, 316
 Famagusta, Cyprus, 1,558
 Genova, Italy, 204
 Gibraltar, 693
 Golfo di Oristano, Sardinia, 264
 Haifa, Israel, 1,596
 Iraklion, Crete, 1,083
 Istanbul, Turkey (via Corinth Canal), 1,342
 Istanbul, Turkey (south of Greece), 1,383
 Izmir, Turkey (via Corinth Canal), 1,187
 Izmir, Turkey (south of Greece), 1,229
 La Spezia, Italy, 231
 Livorno, Italy, 236
 Mahon, Balearic Islands, 219
 Malaga, Spain, 641
 Messina, Sicily, 577
 Napoli, Italy, 456
 Odessa, U.S.S.R. (via Corinth Canal), 1,690
 Odessa, U.S.S.R. (south of Greece), 1,731

Oran, Algeria, 536
 Palermo, Sicily, 495
 Palma, Balearic Islands, 300
 Piraievs, Greece (via Corinth Canal), 988
 Piraievs, Greece (south of Greece), 1,069
 Pollenza, Balearic Islands, 234
 Port Vendres, France, 109
 Porto Vecchio di Piombino, Italy, 247
 Rijeka, Yugoslavia, 1,176
 Savona, Italy, 189
 Sayda, Lebanon, 1,596
 Sibenik, Yugoslavia, 1,050
 Siracusa, Sicily, 649
 Skikda, Algeria, 398
 Split, Yugoslavia, 1,035
 Tarabulus, Lebanon, 1,613
 Tarabulus, Libya, 745
 Taranto, Italy, 797
 Thessaloniki, Greece (via Corinth Canal), 1,236
 Thessaloniki, Greece (south of Greece), 1,278
 Trieste, Free Territory, 1,210
 Tunis, Tunisia, 476
 Valencia, Spain, 347
 Valletta, Malta, 637
 Venezia, Italy, 1,220
 Viareggio, Italy, 238
 Volos, Greece (via Corinth Canal), 1,177
 Volos, Greece (south of Greece), 1,219

MARSHALL, LIBERIA
 (6°07'00" N., 10°24'00" W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 2,927
 Strait of Gibraltar, 2,197
 Straits of Florida (via Providence channels), 4,349

Ports
 Accra, Ghana, 671
 Bathurst, Gambia, 681
 Benguela, Angola, 1,811
 Dakar, Senegal, 724
 Freetown, Sierra Leone, 293
 Lagos, Nigeria, 894
 New York, New York, U.S.A., 3,991

MARTABAN, BURMA
 (16°32'00" N., 97°37'00" E.)

Use Moulmein distances.

MARTINIQUE. See Fort de France.

MASAN, KOREA
 (35°11'00" N., 128°35'00" E.) to:

Ports
 Inchon, Korea, 403
 Shimonoseki, Japan, 146
 Ta-lien, China, 546
 Tsuruga, Japan, 385
 Vladivostok, U.S.S.R., 542

MASNEDSUND, DENMARK
 (55°59'48" N., 11°52'36" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 149
 Skagens Odde, Denmark, 122

Ports
 Gdynia, Poland, 330
 Stockholm, Sweden, 531
 Swinoujscie, Poland, 193

MASQAT, MASCAT AND OMAN
 (23°37'30" N., 58°36'30" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 4,443
 Singapore, 3,153

Ports
 Aden, Aden Protectorate, 1,211
 Al Basrah, Iraq, 773
 Belawan, Indonesia, 2,799
 Bombay, India, 852
 Calcutta, India, 2,830
 Darwin, Australia, 4,873
 Fremantle, Australia, 4,686
 Karachi, Pakistan, 468
 Malacca, Malaysia, 3,017
 Penang, Malaysia, 2,844
 Rangoon, Burma, 2,840

MASSAUA, ETHIOPIA
 (15°36'45" N., 39°28'30" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 5,345
 Cape of Good Hope, Republic of South Africa, 4,341
 Port Said, U.A.R., 1,041
 Singapore (May–September), 4,035
 Singapore (October–April), 4,018
 Torres Strait, Australia (via Eight Degree Channel, May–September), 6,424
 Torres Strait, Australia (via One and Half Degree Channel, October–April), 6,409

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Aden, Aden Protectorate, 400
 Al Aqabah, Jordan, 897
 Al Basrah, Iraq, 2,372
 Bombay, India (October–April), 2,050
 Bombay, India (May–September), 2,068
 Calcutta, India (October–April), 3,695
 Calcutta, India (May–September), 3,712
 Colombo, Ceylon (October–April, via South of Socotra), 2,481
 Colombo, Ceylon (May–September), 2,494
 Darwin, Australia (via One and Half Degree Channel, October–April), 5,749
 Darwin, Australia (via Eight Degree Channel, May–September), 5,764
 Juddah, Saudi Arabia, 364
 Karachi, Pakistan, 1,865
 Mombasa, Kenya, 2,006
 Port Sudan, Sudan, 306
 Rangoon, Burma (October–April), 3,705
 Rangoon, Burma (May–September), 3,723

MASSAWA, ETHIOPIA See Mas-saua.

MATADI, REPUBLIC OF THE CONGO
 (5°49'00" S., 13°27'00" E.) to:

Ports

Bata, Spanish Guinea, 663
 Calabar, Nigeria, 818
 Longji, Cameroon, 731
 Mayumba, Gabon, 282
 Port Nolloth, Republic of South Africa, 1,559
 Swakopmund, Republic of South Africa, 1,144
 Victoria, Cameroon, 770

MATAGORDA BAY, TEXAS, U.S.A.
 (28°20'00" N., 96°23'00" W.) to:

Junction Points*
 Panama, Panama, 1,558
 Straits of Florida, 754
 Yucatan Channel, 729

Ports

Alvaro Obregon, Mexico, 621
 Belize, British Honduras, 957
 Tampico, Mexico, 380

Tuxpan, Mexico, 445
 Veracruz, Mexico, 549

MATANZAS, CUBA
 (23°03'30" N., 81°33'30" W.) to:

Junction Points*
 Straits of Florida, 119
 Yucatan Channel, 241

Ports

Antilla, Cuba, 407
 Cienfuegos, Cuba, 526
 Guantanamo, Cuba, 553
 Hamilton, Bermuda, 1,131
 Kingston, Jamaica, 717
 New Orleans, Louisiana, U.S.A., 641
 New York, New York, U.S.A., 1,167
 Philadelphia, Pennsylvania, U.S.A., 1,147
 Port au Prince, Haiti, 617
 Puerto Padre, Cuba, 330
 San Juan, Puerto Rico, 931
 Santo Domingo, Dominican Republic, 901
 Tampa, Florida, U.S.A. (via Northwest Channel), 325
 Tampico, Mexico, 914

MATARANI, PERU
 (16°59'36" S., 72°07'12" W.) to:

Junction Points*
 Panama, Panama, 1,790
 Punta Arenas, Chile, 2,380

Ports

Antofagasta, Chile, 423
 Callao, Peru, 462

MATHEW TOWN, GREAT INAGUA ISLAND
 (20°57'30" N., 73°40'40" W.) to:

Junction Point*
 Fastnet, Ireland, 3,467

Ports

Belize, British Honduras, 902
 New York, New York, U.S.A. (via Crooked Island Passage), 1,205

MATRUH, UNITED ARAB REPUBLIC
 (31°22'30" N., 27°14'30" E.) to:

Junction Points*
 Port Said, U.A.R., 281
 Strait of Gibraltar, 1,695

Ports

Banghazi, Libya, 267
 Haifa, Israel, 410
 Iraklion, Crete, 308

MATSUGAHAMA, JAPAN
 (43°44'00" N., 146°42'30" E.) to:

Ports

Aleksandrovsk, Sakhalin, U.S.S.R., 589
 Aomori, Japan, 350
 Attu Island, Alaska, U.S.A., 1,179
 Dutch Harbor, Alaska, U.S.A., 1,917
 Hakodate, Japan, 316
 Kholmsk, Sakhalin, U.S.S.R., 361
 Kiska, Alaska, U.S.A., 1,345
 Korsakov, Sakhalin, U.S.S.R., 279
 Muroran, Japan, 310
 Nemuro, Japan, 61
 Nikolayevsk, U.S.S.R., 741
 Otaru, Japan, 435
 Petropavlovsk, U.S.S.R., 765
 Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 730
 Wakkanai, Japan, 294
 Zaliv, Chikhacheva, U.S.S.R., 625

MAURITIUS. See Port Louis

MAYPORT, FLORIDA, U.S.A.
 (30°23'42" N., 81°25'54" W.)

Subtract 18 miles from Jacksonville distances.

MAYUMBA, GABON
 (3°23'27" S., 10°39'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 1,942
 Ushant, France, 4,437

Ports

Douala, Cameroon, 513
 Matadi, Republic of the Congo, 282

MAZAGAN, MOROCCO. See El Jadida.

MAZATLAN, MEXICO
 (23°10'15" N., 106°26'30" W.) to:

Junction Points*
 Panama, Panama, 2,006

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Acapulco, Mexico, 595
 Amapala, Honduras, 1,350
 Champerico, Guatemala, 1,078
 Guaymas, Mexico, 388
 La Libertad, Mexico, 548
 Los Angeles, California, U.S.A., 1,011
 Manzanillo, Mexico, 297
 San Diego, California, U.S.A., 939
 San Francisco, California, U.S.A., 1,337
 San Jose, Guatemala, 1,149
 Yokohama, Japan, 5,782

MELBOURNE, AUSTRALIA
 (37°49'15" S., 144°56'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 1,497
 Panama, Panama (via Foveaux Strait), 7,928
 Wilson Promontory, Australia, 154

Ports
 Adelaide, Australia, 512
 Albany, Australia, 1,363
 Apia, Samoa, 2,834
 Apra, Guam, 3,631
 Auckland, New Zealand, 1,649
 Avarua, Cook Islands, 3,090
 Bluff Harbor, New Zealand, 1,211
 Burnie Harbor, Australia, 223
 Dunedin, New Zealand, 1,309
 Dutch Harbor, Alaska, U.S.A., 6,321
 Hobart, Tasmania, 472
 Honolulu, Hawaii, U.S.A., 4,942
 Jaluit, Marshall Islands, 3,181
 Launceston, Tasmania, 246
 Levuka, Fiji Islands, 2,274
 Los Angeles, California, U.S.A., 7,032
 Lyttelton, New Zealand, 1,518
 Nandi Bay, Fiji Islands, 2,323
 Noumea, New Caledonia, 1,595
 Omura, Bonin Islands, 4,425
 Pago Pago, American Samoa, 2,851
 Papeete, Society Islands, 3,691
 Penang, Malaysia, 4,181
 Ponape, Caroline Islands, 3,078
 Port Lincoln, Australia, 588
 Port Pirie, Australia, 689
 Portland, Australia, 206
 Rabaul, New Britain, 2,408
 Rapid Bay, Australia, 458
 San Francisco, California, U.S.A., 6,970
 Seattle, Washington, U.S.A., 7,332
 Stenhouse Bay, Australia, 505
 Strahan, Australia, 303
 Whyalla, Australia, 665

MELILLA, MOROCCO
 (35°17'30" N., 2°56'00" W.) to:

Junction Points*
 Port Said, U.A.R., 1,821
 Strait of Gibraltar, 153

Ports
 Alicante, Spain, 224
 Arzew, Algeria, 146
 Ceuta, Morocco, 131
 Malaga, Spain, 116
 Mers el Kebir, Algeria, 154
 Mostaganem, Algeria, 119
 Oran, Algeria, 120
 Villa Sanjurjo, Morocco, 64

MEMEL, LITHUANIA. See Klaipeda.

MENTON, FRANCE
 (43°46'30" N., 7°30'40" E.) to:

Junction Points*
 Port Said, U.A.R., 1,449
 Strait of Gibraltar, 791

Ports
 Barcelona, Spain, 285
 Civitavecchia, Italy, 180
 Palma, Balearic Islands, 382

MERS EL KEBIR, ALGERIA
 (35°44'00" N., 0°42'00" W.) to:

Junction Points*
 Port Said, U.A.R., 1,714
 Strait of Gibraltar, 252

Ports
 Alicante, Spain, 160
 Malaga, Spain, 194
 Melilla, Morocco, 119

MERSIN, TURKEY
 (36°47'26" N., 34°38'07" E.) to:

Junction Points*
 Port Said, U.A.R., 358
 Strait of Gibraltar, 1,996

Ports
 Al Ladhigiyah, Syria, 94
 Bayrut, Lebanon, 179
 Constanta, Rumania, 986
 Istanbul, Turkey, 789
 Izmir, Turkey, 594
 Jaffa, Israel, 285
 Kerch, U.S.S.R., 1,214

Larnaca, Cyprus, 149
 Nice, France, 1,495
 Patrai, Greece (via Corinth Canal), 690
 Patrai, Greece (south of Greece), 789
 Piralevs, Greece, 598
 Pula, Yugoslavia (via Corinth Canal), 1,244
 Pula, Yugoslavia (south of Greece), 1,260
 Rostou-na-Donu, U.S.S.R., 1,426
 Tarabulus, Libya, 1,109
 Thessaloniki, Greece, 726

MESSINA, SICILY, ITALY
 (38°11'28" N., 15°33'44" E.) to:

Junction Points*
 Port Said, U.A.R., 945
 Strait of Gibraltar, 1,049

Ports
 Al Khums, Libya, 342
 Alexandria, U.A.R., 834
 Alger, Algeria, 621
 Alicante, Spain, 776
 Ancona, Italy, 536
 Annaba, Algeria, 401
 As Sukhayrah, Tunisia, 406
 Banghazi, Libya, 430
 Barcelona, Spain, 681
 Bari, Italy, 329
 Bayrut, Lebanon, 1,027
 Bizerte, Tunisia, 364
 Brindisi, Italy, 270
 Cagliari, Sardinia, 328
 Cartagena, Spain, 806
 Catania, Sicily, 53
 Ceuta, Morocco, 1,029
 Civitavecchia, Italy, 308
 Crotone, Italy, 367
 Gaeta, Italy, 209
 Gallipoli, Italy, 201
 Genova, Italy, 492
 Gibraltar, 1,031
 Haifa, Israel, 1,023
 Iraklion, Crete, 510
 Istanbul, Turkey (via Corinth Canal), 768
 Istanbul, Turkey (south of Greece), 810
 Izmir, Turkey (via Corinth Canal), 614
 Izmir, Turkey (south of Greece), 655
 Kalamai, Greece, 355
 Khania, Crete, 452
 La Spezia, Italy, 450
 Livorno, Italy, 414
 Malaga, Spain, 979
 Marsaxlokk, Malta, 164
 Marseille, France, 577

*JUNCTION POINT.—See Preface for use of junction points.

Napoli, Italy, 175
 Nice, France, 515
 Odessa, U.S.S.R. (via Corinth Canal), 1,116
 Odessa, U.S.S.R. (south of Greece), 1,158
 Oran, Algeria, 818
 Palermo, Sicily, 120
 Palma, Balearic Islands, 639
 Piraeus, Greece (via Corinth Canal), 414
 Piraeus, Greece (south of Greece), 496
 Porto di Licata, Sicily, 173
 Pozzuoli, Italy, 177
 Preveza, Greece, 274
 Rethimnon, Crete, 479
 Rijeka, Yugoslavia, 603
 Salerno, Italy, 158
 Savona, Italy, 496
 Sete, France, 636
 Sibenik, Yugoslavia, 477
 Siracusa, Sicily, 75
 Soudha, Crete, 473
 Split, Yugoslavia, 462
 Tarabulus, Libya, 344
 Taranto, Italy, 223
 Thessaloniki, Greece (via Corinth Canal), 663
 Thessaloniki, Greece (south of Greece), 704
 Toulon, France, 546
 Trapani, Sicily, 177
 Trieste, Free Territory, 637
 Tunis, Tunisia, 302
 Valencia, Spain, 764
 Valletta, Malta, 156
 Venezia, Italy, 647
 Volos, Greece (via Corinth Canal), 604
 Volos, Greece (south of Greece), 645

METHIL, SCOTLAND

(56°11'00" N., 3°00'00" W.) to:

Junction Points*

Bishop Rock, England, 698
 Pentland Firth, Scotland, 246

Ports

London, England, 407

MIAMI, FLORIDA, U.S.A.

(25°47'00" N., 80°11'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 3,679
 Bishop Rock, England (track B), 3,663

Bishop Rock, England (track C), 3,634
 Cape of Good Hope, Republic of South Africa, 6,685
 Fastnet, Ireland (track A), 3,663
 Fastnet, Ireland (track B), 3,634
 Fastnet, Ireland (track C), 3,578
 Inishtrahull, Ireland (track A), 3,703
 Inishtrahull, Ireland (track B), 3,677
 Inishtrahull, Ireland (track C), 3,618
 Pentland Firth, Scotland (track A), 4,003
 Pentland Firth, Scotland (track B), 3,957
 Pentland Firth, Scotland (track C), 3,856
 Straits of Florida, 217
 Yucatan Channel, 387

Ports

Belize, British Honduras, 734
 Castries, St. Lucia, 1,352
 Charlotte Amalie, Virgin Islands, 991
 Cienfuegos, Cuba (via Windward Passage), 947
 Cienfuegos, Cuba (via Yucatan Channel), 671
 Colon, Panama (via Windward Passage), 1,249
 Colon, Panama (via Yucatan Channel), 1,214
 Elizabeth Harbor, Bahamas, 354
 Georgetown, British Guiana, 1,788
 Guantanamo, Cuba, 582
 Habana, Cuba, 216
 Halifax, Canada, 1,413
 Hamilton, Bermuda, 956
 Kingston, Jamaica, 746
 Nassau, Bahamas, 191
 Pointe à Pitre, Guadeloupe, 1,247
 Port au Prince, Haiti, 643
 Port of Spain, Trinidad, 1,482
 Recife, Brazil, 3,500
 San Juan, Puerto Rico, 960
 Santiago de Cuba, Cuba, 630
 Santo Domingo, Dominican Republic, 930

MIDDLEFART, DENMARK

(55°30'30" N., 9°44'14" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 84
 Skagens Odde, Denmark, 186

Ports

Gdynia, Poland, 396
 Goteborg, Sweden, 173
 Lubeck, Germany, 149

MIDDLESBROUGH, ENGLAND
 (54°34'45" N., 1°13'00" W.) to:

Junction Points*

Bishop Rock, England, 591
 Pentland Firth, Scotland, 326

Ports

Leith, Scotland, 133
 London, England, 293

MIDWAY ISLAND, NORTH PACIFIC
 (28°13'00" N., 177°22'00" W.) to:

Junction Points*

Panama, Panama, 5,707
 Punta Arenas, Chile, 7,382
 Singapore (via Surigao Strait), 4,828

Ports

Apia, Samoa, 2,546
 Apra, Guam, 2,301
 Auckland, New Zealand, 3,937
 Avarua, Cook Islands, 3,140
 Baie du Controleur, Marquesas, 3,124
 Brisbane, Australia, 3,757
 Callao, Peru, 6,280
 Canton, Phoenix Islands, 1,893
 Ching-tao, China, 3,303
 Christmas Island, North Pacific, 1,949
 Darwin, Australia (via Selat Sele), 4,188
 Dutch Harbor, Alaska, U.S.A., 1,651
 Funafuti, Ellice Islands, 2,220
 Guayaquil, Ecuador, 5,944
 Hai-kou, Hai-nan Tao, 3,950
 Hakodate, Japan, 2,198
 Hobart, Tasmania, 4,740
 Hong Kong, B.C.C., 3,728
 Honolulu, Hawaii, U.S.A., 1,149
 Jaluit, Marshall Islands, 1,535
 Johnston Island, 821
 Kahului, Hawaii, U.S.A., 1,266
 Kaunakakai, Hawaii, U.S.A., 1,220
 Kiska, Alaska, U.S.A., 1,453
 Kodiak, Alaska, U.S.A., 2,088
 Koniya, Ryukyu Islands, 2,799
 Lele, Caroline Islands, 1,773
 Levuka, Fiji Islands, 2,833
 Manila, Philippines (via San Bernardino Strait), 3,685
 Manila, Philippines (north of Luzon), 3,752
 Nagasaki, Japan, 2,830
 Noumea, New Caledonia, 3,207
 Omura, Bonin Islands, 2,149
 Pago Pago, American Samoa, 2,593
 Palmyra Island, 1,602
 Papeete, Society Islands, 3,190
 Petropavlovsk, U.S.S.R., 1,831
 Ponape, Caroline Islands, 1,882

*JUNCTION POINT.—See Preface for use of junction points.

Rabaul, New Britain, 2,688
 Sai Gon, Vietnam, 4,421
 San Diego, California, U.S.A., 3,097
 San Francisco, California, U.S.A., 2,792
 Seattle, Washington, U.S.A., 2,817
 Shang-hai, China, 3,184
 Sitka, Alaska, U.S.A., 2,473
 Surabaya, Indonesia (via Makassar Strait), 4,632
 Suva, Fiji Islands, 2,872
 Sydney, Australia, 4,138
 Truk, Caroline Islands, 2,146
 Valparaiso, Chile, 7,042
 Vladivostok, U.S.S.R., 2,612
 Wake Island, Pacific, 1,034
 Yokohama, Japan, 2,250

MIKE, JAPAN
 (33°00'40" N., 130°25'05" E.) to:

Ports
 Hakodate, Japan, 864
 Kobe, Japan, 462
 Nagasaki, Japan, 82
 Shimonoseki, Japan, 222
 Yokohama, Japan (via Osumi Kai-kyo), 725
 Yokohama, Japan (via Bungo Suido), 766

MILAZZO, SICILY, ITALY. See Porto di Milazzo.

MILFORD HAVEN, WALES
 (51°42'00" N., 5°02'00" W.) to:

Junction Points*
 Bishop Rock, England, 129
 Fastnet, Ireland, 178
 Inishtrahull, Ireland, 286

Ports
 Belfast, Ireland, 222
 Horta, Azores, 1,266
 Liverpool, England, 197

MILLER ANCHORAGE, ELEUTHERA ISLAND, BAHAMA ISLANDS
 (24°39'15" N., 76°11'30" W.) to:

Junction Points*
 Panama, Panama, 1,115
 Straits of Florida, 495

Ports
 Jacksonville, Florida, U.S.A., 507

Neuvas, Cuba, 363
 San Juan, Puerto Rico, 714

MINA ABD ALLAH, KUWAIT
 (29°01'00" N., 48°12'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 5,437
 Cape of Good Hope, Republic of South Africa, 5,101
 Port Said, U.A.R., 3,283
 Singapore, 3,822

Ports
 Aden, Aden Protectorate, 1,894
 Bombay, India, 1,514

MINA ABDULLAH, KUWAIT. See Mina Abd Allah.

MINA AL AHMADI, KUWAIT
 (29°04'00" N., 48°10'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 5,440
 Cape of Good Hope, Republic of South Africa, 5,104
 Port Said, U.A.R., 3,286
 Singapore, 3,825

Ports
 Al Basrah, Iraq, 140
 Bombay, India, 1,517

MINA SU'UD, NEUTRAL ZONE, PERSIAN GULF
 (28°44'00" N., 48°28'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 5,418
 Cape of Good Hope, Republic of South Africa, 5,082
 Port Said, U.A.R., 3,264
 Singapore, 3,803

Ports
 Aden, Aden Protectorate, 1,875
 Bombay, India, 1,495

MINATITLAN, MEXICO
 (18°00'00" N., 94°32'00" W.)

Add 18 miles to Puerto Mexico distances.

MINDELLO, CAPE VERDE ISLANDS. See Porto Grande.

MIRAGOANE, HAITI
 (18°27'30" N., 73°06'00" W.) to:

Ports
 Jeremie, Haiti, 63
 Kingston, Jamaica, 243
 Puerto Colombia, Colombia, 549
 San Juan, Puerto Rico, 526
 Santo Domingo, Dominican Republic, 407

MISUMI, JAPAN
 (32°36'00" N., 130°28'00" E.) to:

Ports
 Chi-lung Chiang, Taiwan, 654
 Hagata, Japan, 161
 Inchon, Korea, 478
 Kagoshima, Japan, 184
 Shang-hai, China, 490

MITILINI, GREECE
 (39°06'13" N., 26°33'23" E.) to:

Junction Points*
 Port Said, U.A.R., 592
 Strait of Gibraltar (via Corinth Canal), 1,631
 Strait of Gibraltar (south of Greece), 1,528

Ports
 Izmir, Turkey, 60
 Piraievs, Greece, 191
 Thessaloniki, Greece, 232

MITYLENE, GREECE. See Mitilini.

MOA, CUBA. See Puerto Cayo Moa.

MOBILE, ALABAMA, U.S.A.
 (30°42'30" N., 88°02'30" W.) to:

Junction Points*
 Straits of Florida, 471
 Yucatan Channel, 558

Ports
 Alvaro Obregon, Mexico, 778
 Belize, British Honduras, 845
 Bocas del Toro, Panama, 1,340
 Campeche, Mexico, 674
 Carmen, Mexico, 749
 Cartagena, Colombia, 1,450
 Colon, Panama, 1,371
 Habana, Cuba, 553
 Limon, Costa Rica, 1,292

*JUNCTION POINT.—See Preface for use of junction points.

Livingston, Guatemala, 942
Puerto Barrios, Guatemala, 950
Puerto Cortes, Honduras, 915
Puerto Mexico, Mexico, 834
San Juan del Norte, Nicaragua, 1,240
Tampico, Mexico, 750
Tuxpan, Mexico, 776
Veracruz, Mexico, 825

MOCAMBIQUE, MOZAMBIQUE
(15°01'00" S., 40°43'00" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,807
Port Said, U.A.R., 3,522
Singapore, 4,080

Ports
Antsirana, Malagasy Republic, 570
Beira, Mozambique, 476
Belawan, Indonesia, 3,747
Dar es Salaam, Tanganyika, 533
Darwin, Australia (via 20 miles north of Scott Reef), 5,304
Fremantle, Australia (north of Madagascar), 4,367
Lindi, Tanganyika, 356
Malacca, Malaysia, 3,965
Manakara, Malagasy Republic, 1,197
Mtwara, Tanganyika, 327
Penang, Malaysia, 3,792
Quelimane, Mozambique, 327
Sabang, Indonesia, 3,481
Tulear, Malagasy Republic, 532
Victoria, Seychelles, 1,085

MOCAMEDES, ANGOLA
(15°11'20" S., 12°08'15" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 1,239
Ushant, France, 4,697

Ports
Lagos, Nigeria, 1,399
Porto Grande, Cape Verde Islands, 2,939
Walvisbaai, Southwest Africa, 518

MOCHA ROAD, YEMEN. See Al Mukha.

MOENGO, SURINAM
(5°37'42" N., 54°24'39" W.)

Add 88½ miles to Paramaribo distances.

MOGADISCIO, SOMALI REPUBLIC
(2°01'21" N., 45°21'02" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,855
Port Said, U.A.R., 2,493
Singapore, 3,611

Ports
Aden, Aden Protectorate, 1,106
Mombosa, Kenya, 502

MOHAMMADIA, MOROCCO. See Fedala.

MOJI, JAPAN
(33°56'30" N., 130°57'30" E.) to:

Ports
Esutoru, U.S.S.R., 1,100
Inchon, Korea, 485
Manila, Philippines, 1,436
Nagasaki, Japan, 152
Pusan, Korea, 123
Ta-lien, China, 633
Tien-ching, China, 840
Yen-tai, China, 600

MOKPO, KOREA
(34°46'45" N., 126°23'00" E.) to:

Junction Points*
Lombok Strait, Indonesia, 2,725
Singapore, 2,407
Sunda Strait, Indonesia, 2,760
Wetar Passage, Indonesia (via Molucca Passage), 2,632

Ports
Aleksandrovsk, U.S.S.R., 1,330
Balikpapan, Borneo, 2,308
Ching-huang-tao, China (south of Kasa Do), 484
Ching-tao, China, 336
Chinnampo, Korea (south of Kasa Do), 320
Chinnampo, Korea (via Myondo Sudo), 288
Darwin, Australia, 2,916
Djakarta, Indonesia, 2,741
Hakodate, Japan, 897
Hong Kong, B.C.C., 1,049
Honolulu, Hawaii, U.S.A., 4,146
Hsia-men, China, 790
Inchon, Korea (south of Kasa Do), 236
Inchon, Korea (via Myondo Do), 189
Krung Thep, Thailand, 2,438

Lo-hsing-ta Mao-ti, China, 665
Lu-shun, China (south of Kasa Do), 383
Makasar, Celebes, 2,483
Manila, Philippines (east of Taiwan), 1,338
Nagaski, Japan, 261
Osaka, Japan, 544
Petropavlovsk, U.S.S.R. (via Myongyangdo), 1,923
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 1,943
Pusan, Korea, 225
Sai Gon, Vietnam, 1,904
San Francisco, California, U.S.A., 5,125
Shang-hai, China (via South Channel), 369
Shan-tou, China, 899
Ta-ku, China (south of Kasa Do), 536
Ta-lien, China (south of Kasa Do), 377
Tongyong, Korea, 189
Valdivostok, U.S.S.R., 726
Wei-hai-wei, China (south of Kasa Do), 308
Wonsan, Korea, 530
Yen-tai, China (south of Kasa Do), 342
Yokohama, Japan, 838
Yosu, Korea, 151

MOKUHO, KOREA. See Mokpo.

MOLDE, NORWAY
(62°44'06" N., 7°10'00" E.) to:

Junction Points*
Penland Firth, Scotland, 412
Skagens Odde, Denmark, 492

Ports
Bergen, Norway, 201
Reykjavik, Iceland, 875

MOLLENDO, PERU
(17°01'10" S., 72°01'35" W.) to:

Junction Points*
Panama, Panama, 1,796
Punta Arenas, Chile, 2,374

Ports
Acapulco, Mexico, 2,643
Antofagasta, Chile, 417
Arica, Chile, 137
Caldera, Chile, 606
Callao, Peru, 468

*JUNCTION POINT.—See Preface for use of junction points.

Coquimbo, Chile, 782
 Corinto, Nicaragua, 2,056
 Corral, Chile, 1,378
 Esmeraldas, Ecuador, 1,359
 Guayaquil, Ecuador, 1,126
 Guaymas, Mexico, 3,556
 Iquique, Chile, 220
 Los Angeles, California, U.S.A., 4,094
 Lota, Chile, 1,209
 Monterey, California, U.S.A., 4,346
 Pisco, Peru, 367
 Puerto Montt, Chile, 1,578
 Puntarenas, Costa Rica, 1,871
 Salina Cruz, Mexico, 2,454
 San Blas, Mexico, 3,100
 San Diego, California, U.S.A., 4,024
 San Francisco, California, U.S.A., 4,426
 San Jose, Guatemala, 2,213
 Santa Barbara, California, U.S.A., 4,161
 Talcahuano, Chile, 1,184
 Valparaiso, Chile, 962

MOMBASA, KENYA

(4°03'30" S., 39°41'15" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,472
 Port Said, U.A.R., 3,006
 Singapore, 3,987

Ports

Aden, Aden Protectorate, 1,619
 Beira, Mozambique, 1,146
 Belawan, Indonesia, 3,654
 Bombay, India (May–September), 2,404
 Bombay, India (October–April), 2,420
 Calcutta, India (via One and Half Degree Channel), 3,703
 Colombo, Ceylon (all seasons), 2,555
 Darwin, Australia, 5,434
 Durban, Republic of South Africa, 1,718
 Fremantle, Australia, 4,564
 Karachi, Pakistan, 2,361
 Lourenco Marques, Mozambique, 1,508
 Malacca, Malaysia, 3,872
 Massaua, Ethiopia, 2,006
 Mogadiscio, Somali Republic, 502
 Penang, Malaysia, 3,699
 Rangoon, Burma, 3,714
 Sabang, Indonesia, 3,388
 Tanga, Tanganyika, 69

MOMBASSA, KENYA. See Mom-basa.

MONACO, MONACO

(43°44'00" N., 7°26'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,450
 Strait of Gibraltar, 792

Ports

Barcelona, Spain, 280
 Napoli, Italy, 363
 Palma, Balearic Islands, 377

MONOPOLI, ITALY

(40°57'20" N., 17°18'30" E.) to:

Junction Points*

Port Said, U.A.R., 953
 Strait of Gibraltar, 1,346

Ports

Ancona, Italy, 239
 Durres, Albania, 100
 Split, Yugoslavia, 173

MONROVIA, LIBERIA

(6°20'00" N., 10°49'00" W.) to:

Ports

Anecho, Togo, 850
 Cotonou, Dahomey, 893
 Dakar, Senegal, 693
 Freetown, Sierra Leone, 264
 Grand-Bassam, Ivory Coast, 479
 Guantanamo, Cuba, 3,828
 Lisboa, Portugal, 2,225
 Lome, Togo, 789
 Natal, Brazil, 1,629
 New York, New York, U.S.A., 3,965
 Pointe Noire, Gabon, 1,525
 Port of Spain, Trinidad, 3,045
 Porto Grande, Cape Verde Islands, 1,069
 Sassandra, Ivory Coast, 342
 Sekondi, Ghana, 599
 Takoradi, Ghana, 597

MONTE CHRISTI, DOMINICAN REPUBLIC. See Montecristi.

MONTECRISTI, DOMINICAN REPUBLIC

(19°53'30" N., 71°40'30" W.) to:

Junction Points*

Panama, Panama, 881
 Straits of Florida, 711

Ports

Baltimore, Maryland, U.S.A., 1,213

Boston, Massachusetts, U.S.A., 1,415
 Colon, Panama, 838
 New York, New York, U.S.A., 1,265
 Philadelphia, Pennsylvania, U.S.A., 1,250

MONTEGO BAY, JAMAICA

(18°29'15" N., 77°57'30" W.) to:

Junction Points*

Straits of Florida, 642
 Yucatan Channel, 450

Ports

Cienfuegos, Cuba, 262
 Puerto Siboney, Cuba, 159
 Rio Yateras, Cuba, 196
 Santa Cruz del Sur, Cuba, 134
 Santiago de Cuba, Cuba, 154

MONTE LIMAR, NICARAGUA. See Puerto Masachapa.

MONTEREY, CALIFORNIA, U.S.A.

(36°36'30" N., 121°53'00" W.) to:

Junction Points*

Panama, Panama, 3,165
 Punta Arenas, Chile, 6,113

Ports

Acapulco, Mexico, 1,753
 Antofagasta, Chile, 4,682
 Arica, Chile, 4,471
 Callao, Peru, 3,907
 Coquimbo, Chile, 4,927
 Corinto, Nicaragua, 2,533
 Corral, Chile, 5,327
 Esmeraldas, Ecuador, 3,262
 Guayaquil, Ecuador, 3,434
 Guaymas, Mexico, 1,410
 Iquique, Chile, 4,540
 Lota, Chile, 5,202
 Mollendo, Peru, 4,346
 Pisco, Peru, 4,017
 Puntarenas, Costa Rica, 2,751
 Salina Cruz, Mexico, 2,055
 San Blas, Mexico, 1,337
 San Jose, Guatemala, 2,315
 Talcahuano, Chile, 5,190
 Valparaiso, Chile, 5,060

MONTEVIDEO, URUGUAY

(34°54'30" S., 56°13'30" W.) to:

Junction Points*

Bishop Rock, England, 5,834
 Cape of Good Hope, Republic of South Africa, 3,591

*JUNCTION POINT.—See Preface for use of junction points.

Montreal, Canada, 6,344
 Panama, Panama, 5,379
 Punta Arenas, Chile, 1,300
 Strait of Gibraltar, 5,178
 Straits of Florida, 5,598
 Ushant, France, 5,802
 Yucatan Channel, 5,609

Ports

Angra dos Reis, Brazil, 1,031
 Bahia Blanca, Argentina, 466
 Baltimore, Maryland, U.S.A., 5,831
 Boston, Massachusetts, U.S.A., 5,728
 Bridgetown, Barbados, 4,096
 Brunswick, Georgia, U.S.A., 5,731
 Cape Town, Republic of South Africa, 3,608
 Castries, St. Lucia, 4,261
 Charleston, South Carolina, U.S.A., 5,708
 Charlotte Amalie, Virgin Islands, 4,530
 Charlottetown, Canada, 5,717
 Clarence Bay, Ascension Island, 2,824
 Colon, Panama, 5,267
 Georgetown, British Guiana, 3,840
 Guantanamo, Cuba, 5,167
 Halifax, Canada, 5,617
 Hamilton, Bermuda, 5,097
 Jacksonville, Florida, U.S.A., 5,727
 New York, New York, U.S.A., 5,749
 Norfolk, Virginia, U.S.A., 5,710
 Paranagua, Brazil, 797
 Philadelphia, Pennsylvania, U.S.A., 5,804
 Portland, Maine, U.S.A., 5,759
 Porto Alegre, Brazil, 482
 Recife, Brazil, 2,067
 Rio de Janeiro, Brazil, 1,037
 Rio Grande, Brazil, 313
 St. Helena Island, 2,936
 Salvador, Brazil, 1,735
 Santos, Brazil, 893
 Savannah, Georgia, U.S.A., 5,740
 Stanley, Falkland Islands, 1,013
 Valparaiso, Chile, 2,740
 Wilmington, North Carolina, U.S.A., 5,691

MONTREAL, CANADA*

(45°30'10" N., 73°33'00" W.) to:

Junction Points*

Bishop Rock, England (track D), 3,055
 Bishop Rock, England (track E), 2,856
 Bishop Rock, England (track F), 2,816
 Bishop Rock, England (track G, via Strait of Belle Isle), 2,681

Cape of Good Hope, Republic of South Africa (via Cabot Strait), 7,134
 Fastnet, Ireland (tracks C and D, via Cabot Strait), 2,941
 Fastnet, Ireland (track E, via Cabot Strait), 2,732
 Fastnet, Ireland (track F, via Cabot Strait), 2,687
 Fastnet, Ireland (track G, via Strait of Belle Isle), 2,539
 Inishtrahull, Ireland (tracks C and D, via Cabot Strait), 3,039
 Inishtrahull, Ireland (track E, via Cabot Strait), 2,805
 Inishtrahull, Ireland (track F), 2,744
 Inishtrahull, Ireland (track G, via Strait of Belle Isle), 2,545
 Panama, Panama (via Crooked Island Passage and Windward Passage), 3,204
 Pentland Firth, Scotland (tracks C and D, via Cabot Strait), 3,214
 Pentland Firth, Scotland (track E, via Cabot Strait), 2,959
 Pentland Firth, Scotland (track F), 2,881
 Pentland Firth, Scotland (track G, via Strait of Belle Isle), 2,641
 Punta Arenas, Chile (via Strait of Canso), 7,513
 Punta Arenas, Chile (via Cabot Strait), 7,527
 Strait of Gibraltar (tracks C and D), 3,283
 Strait of Gibraltar (track E), 3,172
 Strait of Gibraltar (track F), 3,163
 Straits of Florida (via Strait of Canso), 2,467
 Straits of Florida (via Cabot Strait), 2,531

Ports

Angmagssalik, Greenland (direct), 1,870
 Angmagssalik, Greenland (via 75 miles of Kap Farvel), 1,904
 Argentia, Canada, 943
 Baltimore, Maryland, U.S.A. (via Strait of Canso), 1,769
 Belem, Brazil (via Cabot Strait), 3,680
 Belize, British Honduras (via Strait of Canso), 2,985
 Bordeaux, France (tracks C and D, via Cabot Strait), 3,362
 Bordeaux, France (track E, via Cabot Strait), 3,183
 Bordeaux, France (track F, via Cabot Strait), 3,152
 Bordeaux, France (via Strait of Belle Isle), 3,045

Boston, Massachusetts, U.S.A. (via Cabot Strait), 1,308
 Boston, Massachusetts, U.S.A. (via Strait of Canso), 1,248
 Brunswick, Georgia, U.S.A., 2,074
 Buenos Aires, Argentina (via Cabot Strait), 6,455
 Cadiz, Spain (tracks C and D), 3,250
 Cadiz, Spain (track E), 3,137
 Cadiz, Spain (track F), 3,129
 Cape Town, Republic of South Africa (via Cabot Strait), 7,118
 Castries, St. Lucia (via Strait of Canso), 2,642
 Charleston, South Carolina, U.S.A. (via Strait of Canso), 1,940
 Charlotte Amalie, Virgin Islands (via Strait of Canso), 2,405
 Charlottetown, Canada, 708
 Colon, Panama (via Strait of Canso), 3,126
 Dakar, Senegal, 3,566
 Frederikshaab, Greenland, 1,901
 Freetown, Sierra Leone, 4,019
 Funchal, Madeira Island (tracks C and D), 2,877
 Funchal, Madeira Island (track E), 2,815
 Funchal, Madeira Island (track F), 2,812
 Georgetown, British Guiana (via Strait of Canso), 3,077
 Habana, Cuba (via Strait of Canso), 2,473
 Halifax, Canada (via Cabot Strait), 955
 Halifax, Canada (via Strait of Canso), 895
 Hamilton, Bermuda (via Strait of Canso), 1,572
 Horta, Azores (via Cabot Strait), 2,145
 Ivigtut, Greenland (via Strait of Belle Isle), 1,472
 Jacksonville, Florida, U.S.A. (via Cabot Strait), 2,199
 Julianehaab, Greenland (via Strait of Belle Isle), 1,470
 Key West, Florida, U.S.A. (via Strait of Canso), 2,415
 La Guaira, Venezuela (via Strait of Canso), 2,941
 Lisboa, Portugal (tracks C and D), 3,076
 Lisboa, Portugal (track E), 2,953
 Lisboa, Portugal (track F), 2,943
 Maracaibo, Venezuela (via Strait of Canso), 2,931
 Montevideo, Uruguay, 6,344
 Murmansk, U.S.S.R., 3,870
 New York, New York, U.S.A. (via Strait of Canso), 1,460

*JUNCTION POINT.—See Preface for use of junction points.

New York, New York, U.S.A. (via Cabot Strait), 1,520
 Norfolk, Virginia, U.S.A. (via Cabot Strait), 1,700
 Paramaribo, Surinam (via Strait of Canso), 3,150
 Philadelphia, Pennsylvania, U.S.A. (via Cabot Strait), 1,671
 Philadelphia, Pennsylvania, U.S.A. (via Strait of Canso), 1,609
 Ponta Delgada, Azores (tracks C and D), 2,361
 Ponta Delgada, Azores (track E), 2,288
 Ponta Delgada, Azores (track F), 2,287
 Port of Spain, Trinidad (via Cabot Strait), 2,901
 Portland, Maine, U.S.A., 1,206
 Recife, Brazil (via Cabot Strait), 4,283
 Reykjavik, Iceland (via Strait of Belle Isle), 2,130
 Rio de Janeiro, Brazil (via Strait of Canso), 5,357
 Rio de Janeiro, Brazil (via Cabot Strait), 5,354
 St. John, Canada (via Cabot Strait), 1,209
 St. John's, Canada (via Cabot Strait), 1,043
 St. John's, Canada (via Strait of Belle Isle), 1,146
 Salvador, Brazil (via Cabot Strait), 4,673
 Salvador, Brazil (via Strait of Canso), 4,676
 San Juan del Norte, Nicaragua (via Strait of Canso and Crooked Island Passage), 3,220
 Santa Cruz de Tenerife, Canary Islands (direct), 3,011
 Santa Cruz de Tenerife, Canary Islands (tracks C and D), 3,056
 Santa Cruz de Tenerife, Canary Islands (track E), 3,012
 Santo Domingo, Dominican Republic (via Cabot Strait), 2,579
 Santos, Brazil, 5,544
 Savannah, Georgia, U.S.A. (via Strait of Canso), 2,013
 Shelburne, Canada, 1,050
 Vigo, Spain (tracks C and D), 3,030
 Vigo, Spain (track E), 2,882
 Vigo, Spain (track F), 2,865
 Willemstad, Curacao (via Cabot Strait), 2,866

MOPPO, KOREA. See Mokpo.

MORMUGAO, INDIA

(15°25'00" N., 73°47'30" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 4,447
 Port Said, U.A.R., 3,078
 Singapore, 2,217

Ports
 Bombay, India, 235
 Colombo, Ceylon, 671
 Karachi, Pakistan, 690
 Okha, India, 533

MOSJOEN, NORWAY

(65°51'18" N., 13°11'05" E.) to:

Junction Points*
 Pentland Firth, Scotland, 651
 Skagens Odde, Denmark, 732

Ports
 Bergen, Norway, 473
 Reykjavik, Iceland, 1,023

MOSKALVO, U.S.S.R.

(53°34'00" N., 142°29'00" E.) to:

Ports
 Aleksandrovsk, U.S.S.R., 230
 De-Kastri, U.S.S.R., 200
 Nagayevo, U.S.S.R., 472
 Yokohama, Japan, 1,453

MOSS, NORWAY

(59°26'18" N., 10°39'30" E.)

Subtract 19 miles from Oslo distances.

MOSSAMEDES, ANGOLA. See Mocamedes.

MOSSELBAAI, REPUBLIC OF SOUTH AFRICA

(34°10'00" S., 22°09'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 206
 Singapore, 5,384

Ports
 Belawan, Indonesia, 5,051
 Darwin, Australia, 5,929
 Fremantle, Australia, 4,525

Malacca, Malaysia, 5,269
 Penang, Malaysia, 5,096
 Sabang, Indonesia, 4,785

MOSSEL BAY, REPUBLIC OF SOUTH AFRICA. See Mosselbaai.

MOSTAGANEM, ALGERIA

(35°56'12" N., 0°04'22" E.) to:

Junction Points*
 Port Said, U.A.R., 1,678
 Strait of Gibraltar, 283

Ports
 Alger, Algeria, 172
 Alicante, Spain, 148
 Melilla, Morocco, 154

MOULMEIN, BURMA

(16°30'00" N., 97°37'00" E.) to:

Junction Points*
 Port Said, U.A.R., 4,742
 Singapore, 1,094

Ports
 Calcutta, India, 824
 Madras, India, 1,043
 Penang, Malaysia, 743

MOZAMBIQUE, MOZAMBIQUE. See Mocambique.

MTWARA, TANGANYIKA

(10°15'30" S., 40°13'04" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 2,111
 Port Said, U.A.R., 3,265
 Singapore, 4,042

Ports
 Dar es Salaam, Tanganyika, 230
 Mocambique, Mozambique, 327

MUHON, BALEARIC ISLANDS. See Mahon.

MURMANSK, U.S.S.R.

(68°58'30" N., 33°03'00" E.) to:

Junction Points*
 Montreal, Canada, 3,870

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Akureyri, Iceland, 1,256
 Bergen, Norway, 1,105
 Boston, Massachusetts, U.S.A., 3,719
 Dikson Harbor, U.S.S.R., 1,025
 Hafnarfjordhur, Iceland, 1,530
 Halifax, Canada, 3,368
 Hvalfjordhur, Iceland, 1,531
 Ivigtut, Greenland (via 75 miles off Kap Farvel), 2,310
 Ivigtut, Greenland (direct), 2,201
 Keflavik, Iceland, 1,521
 Liverpool, England, 1,703
 Longyearbyen, Svalbard, 695
 Mys Chelyuskin, U.S.S.R., 1,390
 New York, New York, U.S.A. (south of Iceland), 3,948
 New York, New York, U.S.A. (north of Iceland), 3,844
 Oslo, Norway, 1,469
 Philadelphia, Pennsylvania, U.S.A., 4,042
 Portland, Maine, U.S.A., 3,677
 Scoresbysund, Greenland, 1,163
 Seydhisfjordhur, Iceland, 1,173
 Reykjavik, Iceland (north of Iceland), 1,501
 Reykjavik, Iceland (south of Iceland), 1,529

MURORAN, JAPAN

(42°19'20" N., 140°58'40" E.) to:

Ports

Bukhta Broutona, Kuril Islands, 625
 Esutoru, U.S.S.R., 594
 Hachinohe, Japan, 123
 Kastka, Japan, 401
 Matsugahama, Japan, 310
 Shelekhovo, Kuril Islands, 859
 Slavnoye, Kuril Islands, 462
 Tomari, Japan, 295

MUSAY'ID, OATAR. See Umm Said

MUSCAT, MUSCAT AND OMAN.
See Masqat.

MUSEL, SPAIN. See Gijon.

MUSKO ISLAND, SWEDEN

(58°59'30" N., 18°09'36" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 473
 Skagens Odde, Denmark, 524

Ports

Gdynia, Poland, 288
 Leningrad, U.S.S.R., 401
 Riga, Latvia, 250

MYS CHELUSKIN, U.S.S.R.

(77°54'00" N., 104°15'00" E.) to:

Ports

Arkhangelsk, U.S.S.R., 1,469
 Dikson Harbor, U.S.S.R., 457
 Murmansk, U.S.S.R., 1,390
 Tiksi, U.S.S.R., 579

MYTILINI, GREECE. See Mitilini.

NAESTVED, DENMARK

(55°13'33" N., 11°45'24" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 74
 Skagens Odde, Denmark, 212

Ports

Gdynia, Poland, 383
 Goteborg, Sweden, 199
 Lubeck, Germany, 136

NAGASAKI, JAPAN

(32°44'30" N., 129°52'15" E.) to:

Junction Points*

Panama, Panama (west of Honshu), 8,200
 Panama, Panama (east of Honshu), 8,299
 Punta Arenas, Chile, 9,567
 Singapore (via Formosa Strait), 2,427
 Singapore (east of Taiwan), 2,413

Ports

Aleksandrovsk, Sakhalin, U.S.S.R., 1,253
 Apia, Samoa, 4,414
 Apra, Guam, 1,445
 Auckland, New Zealand (via Tokara Kaikyo), 4,963
 Auckland, New Zealand (via Koshiki Kaikyo and Tanegashima Kaikyo), 4,930
 Avarua, Cook Islands, 5,219
 Cebu, Philippines (via San Bernardino Strait), 1,406
 Chin-huang-tao, China, 702
 Darwin, Australia (via Selat Sele), 2,785
 Djakarta, Indonesia, 2,712

Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 3,011

Dutch Harbor, Alaska, U.S.A. (south of Kyushu), 3,181

Hagata, Japan, 121

Hakodate, Japan, 801

Hirohata, Japan, 373

Hiroshima, Japan (via Obatake Seto and north of Kasasa Jima), 264

Hiroshima, Japan (via Moroshima Suido), 275

Hiroshima, Japan (via Kudako Suido), 285

Hiroshima, Japan (via Nuwashima Suido), 277

Hong Kong, B.C.C., 1,069

Honolulu, Hawaii, U.S.A., 3,986

Hsia-men, China, 810

Iloilo, Philippines, 1,428

Inchon, Korea, 453

Jaluit, Marshall Islands, 2,808

Kagoshima, Japan, 168

Kamaishi, Japan, 972

Kobe, Japan, 400

Kochi, Japan, 366

Kuang-chou, China, 1,152

Levuka, Fiji Islands (via Tanegashima Kaikyo), 4,260

Lien-yun, China, 558

Lo-hsing-ta Mao-ti, China, 691

Los Angeles, California, U.S.A., 5,572

Lu-shun, China, 601

Manila, Philippines, 1,298

Midway Island, 2,830

Miike, Japan, 82

Moji, Japan, 152

Mokpo, Korea, 261

Nase, Japan, 270

Noumea, New Caledonia (via Bougainville Strait), 3,967

Omura, Bonin Islands, 786

Pago Pago, American Samoa, 4,489

Papeete, Society Islands, 5,572

Petropavlovsk, U.S.S.R. (via La Perouse Strait), 1,845

Petropavlovsk, U.S.S.R. (via Tsugaru Strait), 1,858

Petropavlovsk, U.S.S.R. (via Osumi Kaikyo), 2,039

Ponape, Caroline Islands, 2,256

Pusan, Korea, 163

Rabaul, New Britain, 2,612

San Francisco, California, U.S.A. (via Tsugaru Strait), 5,030

San Francisco, California, U.S.A. (via Osumi Strait), 5,151

Seattle, Washington, U.S.A. (via Tsugaru Strait and south of Aleutian Islands), 4,765

Seattle, Washington, U.S.A. (via Tsugaru Strait and north of Aleutian Islands), 4,705

*JUNCTION POINT.—See Preface for use of junction points.

Shang-hai, China, 463
 Shan-tou, China, 919
 Shimonoseki, Japan, 159
 Sydney, Australia, 4,439
 Ta-ku, China, 754
 Tan-shui, Taiwan, 636
 Valparaiso, Chile, 9,806
 Vladivostok, U.S.S.R., 657
 Wei-hai-wei, China, 526
 Wonsan, Korea, 452
 Yen-tai, China, 560
 Yokohama, Japan (via Osumi Kai-kyo), 691

NAGAYEVO, U.S.S.R.
 (59°33'00'' N., 150°45'00'' E.) to:

Ports
 Moskalvo, U.S.S.R., 472
 Petropavlovsk, U.S.S.R., 864
 Reyd Urkt, U.S.S.R., 441

NAGOYA, JAPAN
 (35°05'00'' N., 136°53'00'' E.) to:

Ports
 Apra, Guam, 1,378
 Esutoru, U.S.S.R., 1,189
 Hachinohe, Japan, 577
 Hirohata, Japan, 259
 Imabari, Japan, 341
 Kobe, Japan, 245
 Shimizu, Japan, 143
 Shimonoseki, Japan, 434
 Ube, Japan, 419
 Yokohama, Japan, 214

NAHA, OKINAWA JIMA, RYUKYU ISLANDS
 (26°12'20'' N., 127°40'11'' E.) to:

Ports
 Apra, Guam, 1,236
 Chi-lung Chiang, Taiwan, 337
 Hachinohe, Japan, 1,239
 Pusan, Korea, 550
 Shang-hai, China, 479
 Shimonoseki, Japan, 530

NAJKIN, KOREA
 (42°14'00'' N., 130°18'00'' E.) to:

Ports
 Kobe, Japan, 754
 Tongyong, Korea, 501
 Ulsan, Korea, 418
 Yosu, Korea, 535

NAKAGUSUKU, OKINAWA JIMA, RYUKYU ISLANDS
 (26°17'00'' N., 127°53'00'' E.) to:

Ports
 Apra, Guam, 1,216
 Manila, Philippines, 935
 Shang-hai, China, 515
 Ta-ku, China, 1,026
 Yokohama, Japan, 839

NAKHODKA, U.S.S.R.
 (42°49'07'' N., 132°53'52'' E.) to:

Ports
 Esutoru, U.S.S.R., 561
 Hakodate, Japan, 62
 Pusan, Korea, 508
 Shang-hai, China, 991
 Shimonoseki, Japan, 552

NAKNEK, ALASKA, U.S.A.
 (58°42'00'' N., 157°15'00'' W.) to:

Junction Points*
 Panama, Panama, 5,604

Ports
 Honolulu, Hawaii, U.S.A., 2,404
 Kodiak, Alaska, U.S.A., 881
 San Diego, California, U.S.A., 2,788
 Seattle, Washington, U.S.A., 2,020

NAKSKOV, DENMARK
 (54°50'00'' N., 11°07'30'' E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 46
 Skagens Odde, Denmark, 213

Ports
 Gdynia, Poland, 335
 Goteborg, Sweden, 201
 Swinoujscie, Poland, 190

NAMSOS, NORWAY
 (64°28'00'' N., 11°29'25'' E.) to:

Junction Points*
 Pentland Firth, Scotland, 615
 Skagens Odde, Denmark, 696

Ports
 Bergen, Norway, 384
 Reykjavik, Iceland, 1,018

NANAIMO, CANADA
 (49°10'00'' N., 123°55'45'' W.) to:

Ports
 Bellingham, Washington, U.S.A., 76
 New Westminster, Canada, 47
 Port Angeles, Washington, U.S.A., 98
 Prince Rupert, Canada, 453
 Seattle, Washington, U.S.A., 132
 Vancouver, Canada, 35
 Victoria, Canada, 86

NANAO, JAPAN
 (37°03'40'' N., 136°58'00'' E.) to:

Ports
 Hakodate, Japan, 337
 Maizuru, Japan, 213
 Pusan, Korea, 476
 Shimonoseki, Japan, 453
 Vladivostok, U.S.S.R., 460

NAN-CHANG, CHINA
 (28°42'30'' N., 115°53'30'' E.) to:

Add 483 miles to Shang-hai distances for ports outside the Yangze River.

Ports
 Han-kou, China, 231
 Nan-ching, China, 306
 Shang-hai, China, 513

NAN-CHING, CHINA
 (32°06'00'' N., 118°44'00'' E.) to:

Add 177 miles to Shang-hai distances.

Ports
 Han-kou, China, 385
 Nan-chang, China, 306
 Shang-hai, China, 207

NANDI BAY, FIJI ISLANDS
 (16°58'00'' S., 178°48'00'' E.) to:

Ports
 Apra, Guam, 2,886
 Auckland, New Zealand, 1,224
 Brisbane, Australia, 1,618
 Hobart, Tasmania, 2,288
 Melbourne, Australia, 2,323

NANKING, CHINA. See Nan-ching.

NANORTALIK, GREENLAND
 (60°08'30'' N., 45°14'35'' W.) to:

Junction Points*
 Pentland Firth, Scotland, 1,291
 Strait of Gibraltar, 2,138

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Churchill, Canada, 1,511
Reykjavik, Iceland, 737
St. John's, Canada, 821

NANTES, FRANCE

(47°11'42" N., 1°35'15" W.)

Add 29 miles to St. Nazaire distances.

NAPLES, ITALY. See Napoli.

NAPOLI, ITALY

(40°50'19" N., 14°16'20" E.) to:

Junction Points*

Port Said, U.A.R., 1,116
Strait of Gibraltar, 1,001

Ports

Al Ladhiqiyah, Syria, 1,191
Alexandria, U.A.R., 1,005
Alger, Algeria, 582
Alicante, Spain, 723
Ancona, Italy, 707
Annaba, Algeria, 338
Banghazi, Libya, 602
Barcelona, Spain, 559
Bari, Italy, 500
Basti, Corsica, 258
Bayrut, Lebanon, 1,198
Bizerte, Tunisia, 300
Brindisi, Italy, 442
Cagliari, Sardinia, 272
Cannes, France, 381
Cartagena, Spain, 756
Catania, Sicily, 225
Ceuta, Morocco, 982
Civitavecchia, Italy, 152
Genova, Italy, 338
Gibraltar, 983
Haifa, Israel, 1,194
Iraklion, Crete, 681
Istanbul, Turkey (via Corinth Canal), 940
Istanbul, Turkey (south of Greece), 981
Izmir, Turkey (via Corinth Canal), 785
Izmir, Turkey (south of Greece), 827
La Spezia, Italy, 302
Livorno, Italy, 267
Malaga, Spain, 932
Marsala, Sicily, 214
Marseille, France, 456
Messina, Sicily, 175
Monaco, Monaco, 363
Nice, France, 369

Odessa, U.S.S.R. (via Corinth Canal), 1,288

Odessa, U.S.S.R. (south of Greece), 1,329

Olbia, Sardinia, 222

Oran, Algeria, 775

Palermo, Sicily, 170

Palma, Balearic Islands, 582

Patrai, Greece, 485

Piraeus, Greece (via Corinth Canal), 586

Piraeus, Greece (south of Greece), 667

Port Vendres, France, 521

Porto di Milazzo, Sicily, 54

Porto di Reggio Calabria, Sicily, 179

Porto Vecchio di Piombino, 227

Rijeka, Yugoslavia, 775

Savona, Italy, 350

Sete, France, 515

Sibenik, Yugoslavia, 648

Siracusa, Sicily, 247

Split, Yugoslavia, 633

Taormina, Sicily, 202

Tarabulus, Libya, 516

Taranto, Italy, 395

Terracina, Italy, 65

Thessaloniki, Greece (via Corinth Canal), 834

Thessaloniki, Greece (south of Greece), 876

Toulon, France, 424

Trapani, Italy, 198

Trieste, Free Territory, 808

Tunis, Tunisia, 313

Valencia, Spain, 690

Valetta, Malta, 327

Venezia, Italy, 818

Villa San Giovanni, Italy, 173

Villefranche, France, 369

Volos, Greece (via Corinth Canal), 775

Volos, Greece (south of Greece), 817

NARSARSSUAK, GREENLAND

(61°09'45" N., 45°27'45" W.) to:

Junction Points*

Pentland Firth, Scotland, 1,384

Strait of Gibraltar, 2,257

Ports

Churchill, Canada, 1,513

Reykjavik, Iceland, 830

St. John's, Canada, 916

NARVIK, NORWAY

(68°25'30" N., 17°25'00" E.) to:

Junction Points*

Bishop Rock, England (via English Channel), 1,505

Ushant, France, 1,498

Ports

Antwerpen, Belgium, 1,211

Bergen, Norway, 624

Bremerhaven, Germany, 1,058

Le Havre, France, 1,304

London, England, 1,215

Longyearbyen, Svalbard, 659

Oslo, Norway, 993

Pechenga, U.S.S.R., 500

Philadelphia, Pennsylvania, U.S.A. (track B), 3,976

Rotterdam, Netherlands, 1,139

Stockholm, Sweden, 1,612

NASE, JAPAN

(28°23'12" N., 129°30'00" E.) to:

Ports

Hakodate, Japan, 1,048

Kobe, Japan, 483

Nagasaki, Japan, 270

Skimonoseki, Japan, 406

Yokohama, Japan, 686

NASSAU, BAHAMA ISLANDS

(25°05'10" N., 77°19'50" W.) to:

Junction Points*

Panama, Panama (via Windward Passage), 1,210

Straits of Florida, 393

Yucatan Channel, 556

Ports

Baltimore, Maryland, U.S.A., 880

Boston, Massachusetts, U.S.A., 1,173

Bridgetown, Barbados, 1,284

Charleston, South Carolina, U.S.A., 507

Cienfuegos, Cuba, 868

Colon, Panama, 1,178

Fernandina, Florida, U.S.A., 450

Guantanamo, Cuba, 503

Habana, Cuba, 390

Hamilton, Bermuda, 829

Jacksonville, Florida, U.S.A. (via Northeast Providence Channel), 456

Kingston, Jamaica, 667

Miami, Florida, U.S.A., 191

New York, New York, U.S.A., 962

Norfolk, Virginia, U.S.A., 758

Nuevitas, Cuba, 454

Philadelphia, Pennsylvania, U.S.A., 930

Port au Prince, Haiti, 564

*JUNCTION POINT.—See Preface for use of junction points.

San Juan, Puerto Rico, 799
Santiago de Cuba, Cuba, 566
Santo Domingo, Dominican Republic,
851
Savannah, Georgia, U.S.A., 503
Wilmington, North Carolina, U.S.A.,
561

NATAL, BRAZIL
(5°45'00" S., 35°11'00" W.) to:

Junction Points*
Punta Arenas, Chile, 3,400
Strait of Gibraltar, 3,003
Ushant, France, 3,619

Ports
Belem, Brazil, 954
Bissau, Portuguese Guiana, 1,604
Buenos Aires, Argentina, 2,329
Cayenne, French Guiana, 1,250
Dakar, Senegal, 1,620
El Ferrol del Caudillo, Spain, 3,312
Freetown, Sierra Leone, 1,569
Galway, Ireland, 3,786
Georgetown, British Guiana, 1,630
Lagos, Nigeria, 2,425
Monrovia, Liberia, 1,629
New York, New York, U.S.A., 3,532
Paramaribo, Surinam, 1,476
Rio de Janeiro, Brazil, 1,228
St. John's, Canada, 3,341

NAUPLIA, GREECE. See Navplion.

NAVPLION, GREECE
(37°33'45" N., 22°47'00" E.) to:

Junction Points*
Port Said, U.A.R., 613
Strait of Gibraltar, 1,484

Ports
Iraklion, Crete, 237
Izmir, Turkey, 258
Piraeus, Greece, 142

NAZE, JAPAN. See Nase.

NEGAPATAM, INDIA
(10°46'00" N., 79°55'00" E.) to:

Junction Point*
Singapore, 1,568

Ports
Colombo, Ceylon, 476

NELSON, NEW ZEALAND
(41°14'00" S., 173°15'00" E.) to:

Junction Points*
Cape Leeuwin, Australia, 2,794
Torres Strait, Australia, 2,646

Ports
Auckland, New Zealand, 633
Brisbane, Australia, 1,380
Sydney, Australia, 1,166

NEMOURS, ALGERIA. See Gha-
zaouet.

NEMURO, JAPAN
(43°20'30" N., 145°35'00" E.) to:

Ports
Bukhta Broutona, Kuril Islands, 370
Kasatka, Japan, 139
Matsugahama, Japan, 61
Reyd Urkt, U.S.S.R., 631
Shelekhovo, Kuril Islands, 598
Slavnoye, Kuril Islands, 199
Tomari, Japan, 22
Yokohama, Japan, 653

NEVEL'SK, U.S.S.R. See Honto.

**NEW AMSTERDAM, BRITISH
GUIANA**
(6°25'00" N., 57°28'36" W.) to:

Junction Points*
Panama, Panama, 1,581
Yucatan Channel, 1,907

Ports
Belem, Brazil, 859
Charlotte Amalie, Virgin Islands, 903
Port of Spain, Trinidad, 437

**NEW HAVEN, CONNECTICUT,
U.S.A.**
(41°17'24" N., 75°54'30" W.) to:

Junction Points*
Inishtrahull, Ireland, 2,867
Panama, Panama, 2,106
Strait of Gibraltar, 3,161

Ports
Habana, Cuba, 1,280
Halifax, Canada, 540

**NEW LONDON, CONNECTICUT,
U.S.A.**
(41°21'30" N., 72°05'30" W.) to:

Junction Points*
Bishop Rock, England (track A),
2,992
Bishop Rock, England (track B),
2,954
Bishop Rock, England (track C),
2,881
Fastnet, Ireland (track A), 2,884
Fastnet, Ireland (track B), 2,845
Fastnet, Ireland (track C), 2,763
Inishtrahull, Ireland (track A), 3,010
Inishtrahull, Ireland (track B), 2,964
Inishtrahull, Ireland (track C), 2,861
Pentland Firth, Scotland (track A),
3,224
Pentland Firth, Scotland (track B),
3,168
Pentland Firth, Scotland (track C),
3,041
Strait of Gibraltar (track A), 3,132
Strait of Gibraltar (track B), 3,122
Strait of Gibraltar (track C), 3,106

Ports
Bordeaux, France (track A), 3,270
Bordeaux, France (track B), 3,239
Bordeaux, France (track C), 3,184
Hamilton, Bermuda, 667

NEW ORLEANS, LOUISIANA, U.S.A.
(29°57'00" N., 90°03'30" W.) to:

Junction Points*
Panama, Panama (via South Pass),
1,433
Straits of Florida (via South Pass),
524
Yucatan Channel, 577

Ports
Alvaro Obregon, Mexico, 755
Barranquilla, Colombia, 1,458
Belize, British Honduras (via South
Pass), 850
Bluefields, Nicaragua (via South Pass
and inside route), 1,201
Bocas del Toro, Panama (via South
Pass and inside route), 1,353
Campeche, Mexico (via Southwest
Pass), 650
Carmen, Mexico, 723
Cartagena, Colombia, 1,468
Colon, Panama, 1,389
Habana, Cuba (via South Pass), 602
Marcaibo, Venezuela (via South Pass),
1,629
Matanzas, Cuba, 641

*JUNCTION POINT.—See Preface for use of junction points.

Progreso, Mexico, 556
 Puerto Barrios, Guatemala, 961
 Puerto Cortes, Honduras (via South Pass), 916
 Puerto Mexico, Mexico, 801
 San Juan del Norte, Nicaragua, 1,262
 Tampico, Mexico (via Southwest Pass), 711
 Tela, Honduras, 915
 Tuxpan, Mexico (via Southwest Pass), 739
 Veracruz, Mexico (via Southwest Pass), 789

NEW SHOREHAM, ENGLAND. See Shoreham By Sea.

NEW WESTMINSTER, CANADA
 (49°12'00" N., 122°54'30" W.) to:

Ports
 Nanaimo, Canada, 47
 Port Angeles, Washington, U.S.A., 90
 Prince Rupert, Canada, 492
 Seattle, Washington, U.S.A., 126

NEW YORK, NEW YORK, U.S.A.
 (40°42'00" N., 74°01'00" W.) to:

Junction Points*
 Bishop Rock, England (track A), 3,069
 Bishop Rock, England (track B), 3,030
 Bishop Rock, England (track C), 2,957
 Cape of Good Hope, Republic of South Africa, 6,801
 Fastnet, Ireland (track A), 2,959
 Fastnet, Ireland (track B), 2,916
 Fastnet, Ireland (track C), 2,837
 Inishtrahull, Ireland (track A), 3,089
 Inishtrahull, Ireland (track B), 3,043
 Inishtrahull, Ireland (track C), 2,940
 Montreal, Canada (via Strait of Canso), 1,460
 Montreal, Canada (via Cabot Strait), 1,520
 Panama, Panama, 2,018
 Pentland Firth, Scotland (track A), 3,303
 Pentland Firth, Scotland (track B), 3,247
 Pentland Firth, Scotland (track C), 3,120
 Punta Arenas, Chile, 6,947
 Strait of Gibraltar (track A), 3,208
 Strait of Gibraltar (track B), 3,194

Strait of Gibraltar (tracks C and D), 3,180
 Straits of Florida (via outer route), 1,184
 Straits of Florida (via inner route), 1,237
 Yucatan Channel (southbound, outside route) 1,366

Ports
 Abraham Bay, Bahamas, 1,115
 Angmagssalik, Greenland (direct), 2,275
 Angmagssalik, Greenland (via 75 miles of Kap Farvel), 2,290
 Antilla, Cuba, 1,226
 Argentia, Canada, 1,009
 Arkhangelsk, U.S.S.R. (Clear of general maximum winter solid pack ice in the vicinity of Iceland), 4,320
 Arkhangelsk, U.S.S.R., 4,216
 Bahia Blanca, Argentina, 6,154
 Bahia de Samana, Dominican Republic, 1,328
 Bahia Honda, Cuba (outside), 1,226
 Banes, Cuba (via Crooked Island Passage), 1,216
 Baracoa, Cuba, 1,226
 Barranquilla, Colombia, 1,801
 Basse-Terre, Guadeloupe (via Anegada Channel), 1,624
 Basseterre, St. Christopher, 1,531
 Belem, Brazil, 3,015
 Bilbao, Spain (track C), 3,160
 Bluefields, Nicaragua (via Yucatan Channel), 1,995
 Bluefields, Nicaragua (via Windward Passage), 2,001
 Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 2,048
 Boma, Republic of the Congo, 5,591
 Bordeaux, France (track A), 3,344
 Bordeaux, France (track B), 3,310
 Bordeaux, France (track C), 3,258
 Brest, France (track A), 3,151
 Brest, France (track B), 3,114
 Brest, France (track C), 3,049
 Bridgetown, Barbados, 1,829
 Buenos Aires, Argentina, 5,871
 Cadiz, Spain (track A), 3,175
 Cadiz, Spain (track B), 3,160
 Cadiz, Spain (tracks C and D), 3,146
 Cap Haitien, Haiti, 1,283
 Cape Town, Republic of South Africa, 6,786
 Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,853
 Castries, St. Lucia, 1,747
 Cayenne, French Guiana, 2,447
 Charlestown, Nevis, 1,539

Charlotte Amalie, Virgin Islands, 1,434
 Charlottetown, Canada (via Strait of Canso), 832
 Christiansted, Virgin Islands (via Virgin Passage), 1,465
 Cienfuegos, Cuba (via Crooked Island Passage and Windward Passage), 1,682
 Clarence Bay, Ascension Island, 4,395
 Cockburn Town, Bahamas, 1,004
 Colon, Panama (via Crooked Island Passage), 1,974
 Colon, Panama (via Yucatan Channel), 2,176
 Dakar, Senegal, 3,335
 Elizabeth Harbor, Bahamas, 1,048
 Exuma Harbor, Bahamas, 1,053
 Fernando de Noronha, 3,517
 Fort de France, Martinique (via Anegada Channel), 1,717
 Fort Liberte, Haiti, 1,283
 Fortaleza, Brazil, 3,304
 Frederikshaab, Greenland, 1,959
 Freetown, Sierra Leone, 3,757
 Funchal, Madeira Island (direct), 2,761
 Funchal, Madeira Island (track A), 2,766
 Georgetown, British Guiana, 2,317
 Gibara, Cuba (via Crooked Island Passage), 1,216
 Gonaives, Haiti, 1,328
 Grand Turk, Grand Turk Island, 1,167
 Great Harbor, Culebra Island, 1,422
 Guantanamo, Cuba (via Crooked Island Passage and Windward Passage), 1,312
 Habana, Cuba, 1,186
 Halifax, Canada, 600
 Hamilton, Bermuda, 697
 Horta, Fayal, Azores, 2,098
 Isabel Segunda, Isla de Vieques, 1,430
 Ivigtut, Greenland, 1,933
 Jacmel, Haiti, 1,489
 Julianehaab, Greenland, 1,911
 Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,474
 Kingstown, St. Vincent, 1,791
 La Ceiba, Honduras, 1,743
 La Coruna, Spain, 2,917
 La Guaira, Venezuela (via Mona Passage), 1,848
 Lagos, West Africa, 4,883
 Las Palmas de Gran Canaria, Canary Islands, 2,965
 Las Piedras, Venezuela, 1,796
 Las Cayes, Haiti, 1,447
 Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 2,047

*JUNCTION POINT.—See Preface for use of junction points.

Lisboa, Portugal (track A), 3,009
 Lisboa, Portugal (track B), 2,991
 Lisboa, Portugal (tracks C and D), 2,972
 Liverpool, Canada, 536
 Livingston, Guatemala (via Straits of Florida, southbound), 1,796
 Luanda, Angola, 5,670
 Luderitz Bay, Southwest Africa, 6,393
 Maracaibo, Venezuela, 1,890
 Marshall, Liberia, 3,991
 Matanzas, Cuba, 1,167
 Mathew Town, Great Inagua Island (via Crooked Island Passage), 1,205
 Monrovia, Liberia, 3,965
 Montecristi, Dominican Republic, 1,265
 Montevideo, Uruguay, 5,753
 Murmansk, U.S.S.R. (north of Iceland), 3,844
 Murmansk, U.S.S.R. (south of Iceland), 3,948
 Nassau, Bahamas (via Northwest Providence Channel), 962
 Natal, Brazil, 3,541
 Nuevitas, Cuba (via Crooked Island Passage), 1,274
 Paramaribo, Surinam, 2,334
 Parrsboro, Canada, 591
 Plymouth, Montserrat, 1,574
 Pointe à Pitre, Guadeloupe, 1,652
 Ponce, Puerto Rico (via Mona Passage), 1,462
 Ponta Delgada, Azores (track A), 2,262
 Ponta Delgada, Azores (track B), 2,255
 Ponta Delgada, Azores (direct), 2,247
 Port Lamar, Venezuela (via Virgin Passage), 1,879
 Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,423
 Port au Prince, Haiti (via Crooked Island Passage), 1,372
 Port of Spain, Trinidad (via Virgin Passage), 1,939
 Port Plata, Dominican Republic (via Turks Island Passage), 1,270
 Porto, Portugal (track C), 2,953
 Porto Grande, Cape Verde Islands, 2,913
 Praia, Azores, 2,173
 Pregreso, Mexico, 1,609
 Puerto Barrios, Guatemala (via Straits of Florida, southbound), 1,804
 Puerto Cortes, Honduras (via Straits of Florida, southbound), 1,764
 Puerto Manati, Cuba, 1,244
 Recife, Brazil, 3,698
 Reykjavik, Iceland, 2,495

Rio de Janeiro, Brazil, 4,770
 Roosevelt Roads, Puerto Rico, 1,429
 St. John, Canada (via Vineyard Sound and Long Island Sound), 486
 St. John, Canada (Nantucket Light Vessel), 545
 St. Johns, Antigua (via Anegada Channel), 1,572
 St. John's, Canada, 1,093
 St. Pierre, Martinique (via Anegada Channel), 1,705
 Salvador, Brazil, 4,089
 San Juan, Puerto Rico, 1,399
 San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,047
 San Juan del Norte, Nicaragua (via Crooked Island Passage and Windward Passage), 2,032
 Sanchez, Dominican Republic, 1,350
 Santa Barbara de Samana, Dominican Republic, 1,334
 Sant Cruz de Tenerife, Canary Islands, 2,936
 Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,783
 Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 1,362
 Santo Dominga, Dominican Republic, 1,489
 Santos, Brazil, 4,957
 Sao Luiz, Brazil, 3,076
 Sint Nicolass, Aruba (via Mona Passage), 1,761
 Sint Nicolaas, Aruba (via Windward Passage), 1,805
 Stanley, Falkland Islands, 6,547
 Sydney, Canada, 808
 Vigo, Spain (track A), 2,986
 Vigo, Spain (track B), 2,960
 Vigo, Spain (tracks C and D), 2,926
 Villa do Porto, Azores, 2,279
 Vitoria, Brazil, 4,507
 Walvisbaai, Southwest Africa, 6,228
 Willemstad, Curacao, 1,771
 Yarmouth, Canada (Nantucket Light Vessel), 464
 Yarmouth, Canada (via Pollok Rip Channel), 440

NEWARK, NEW JERSEY, U.S.A.
 See Port Newark.

NEWCASTLE, AUSTRALIA
 (32°55'30" S., 151°47'00" E.) to:

Junction Point*
 Panama, Panama, 7,654

Ports
 Kiama Harbor, Australia, 117
 Los Angeles, California, U.S.A., 6,456
 Portland, Oregon, U.S.A., 6,833
 San Francisco, California, U.S.A., 6,467

NEWCASTLE, ENGLAND
 (54°58'00" N., 1°35'00" W.) to:

Junction Points*
 Bishop Rock, England, 616
 Kiel Canal (east end), Germany, 439
 Pentland Firth, Scotland, 265
 Skagens Odd, Denmark, 445
 Ushant, France, 604

Ports
 Amsterdam, Netherlands, 286
 Antwerpen, Belgium, 351
 Bergen, Norway, 403
 Bremerhaven, Germany, 374
 Dunkerque, France, 307
 Egersund, Norway, 329
 Emden, Germany, 329
 Esbjerg, Denmark, 349
 Hamburg, Germany, 424
 Hull, England, 143
 Kristiansand, Norway, 376
 Le Harve, France, 411
 London, England, 325
 Nieuwpoort, Belgium, 309
 Oostende, Belgium, 291
 Oslo, Norway, 528
 Plymouth, England, 524
 Portland, England, 453
 Portsmouth, England, 403
 Rotterdam, Netherlands, 285
 Southampton, England, 421
 Stavanger, Norway, 349
 Wilhelmshaven, Germany, 367
 Zeebrugge, Belgium, 289

NEWCHWANG, CHINA. See Kingkou.

NEWPORT, RHODE ISLAND, U.S.A.
 (44°29'50" N., 71°19'50" W.)

Subtract 20 miles from Providence distances.

NEWPORT, WALES
 (51°33'20" N., 2°58'00" W.) to:

Junction Points*
 Bishop Rock, England, 177
 Fastnet, Ireland, 258
 Inishtrahull, Ireland, 371

*JUNCTION POINT.—See Preface for use of junction points.

<p>Ports Dublin, Ireland, 219 Liverpool, England, 284</p> <p>NEWPORT NEWS, VIRGINIA, U.S.A. (36°58'00" N., 76°26'00" W.)</p> <p>Subtract 3 miles from Norfolk distances.</p> <p>NHA BE, VIETNAM (10°42'00" N., 106°45'00" E.)</p> <p>Subtract 9 miles from Sai Gon distances.</p> <p>NHA TRANG BAY, VIETNAM (12°15'00" N., 109°13'00" E.) to:</p> <p>Junction Points* Singapore, 769</p> <p>Ports Hong Kong, B.C.C., 678 Kao-hsiung Chiang, Taiwan, 895 Manila, Philippines, 706 Sai Gon, Vietnam, 264</p> <p>NICARO, LENGUA DE PAJARO, CUBA (20°43'12" N., 75°32'52" W.) to:</p> <p>Junction Points* Panama, Panama, 881 Straits of Florida, 488</p> <p>Ports Neuvitas, Cuba, 132 San Juan, Puerto Rico, 561</p> <p>NICE, FRANCE (43°41'40" N., 7°17'07" E.) to:</p> <p>Junction Points* Port Said, U.A.R., 1,456 Strait of Gibraltar, 788</p> <p>Ports Ajaccio, Corsica, 138 Almeria, Spain, 627 Cagliari, Sardinia, 354 Constanta, Rumania (via Corinth Canal), 1,476 Constanta, Rumania (south of Greece), 1,518 Genova, Italy, 89 Iskenderun, Turkey, 1,553</p>	<p>Istanbul, Turkey (via Corinth Canal), 1,279 Istanbul, Turkey (south of Greece), 1,321 Jaffa, Israel, 1,541 Kerch, U.S.S.R. (via Corinth Canal), 1,714 Kerch, U.S.S.R. (south of Greece), 1,756 Larnaca, Cyprus, 1,457 Livorno, Italy, 134 Mersin, Turkey, 1,495 Messina, Sicily, 515 Napoli, Italy, 369 Patrai, Greece, 825 Sant Antioco Ponti, Sardinia, 310 Valletta, Malta, 592</p> <p>NIEUWPOORT, BELGIUM (51°08'07" N., 2°45'30" E.) to:</p> <p>Junction Points* Bishop Rock, England, 375 Pentland Firth, Scotland, 531</p> <p>Ports Bremerhaven, Germany, 312 Newcastle, England, 309 Southampton, England, 176</p> <p>NIIGATA, JAPAN (37°58'00" N., 139°04'00" E.) to:</p> <p>Ports Hakodate, Japan, 247 Honto, U.S.S.R., 549 Maizuru, Japan, 256 Pusan, Korea, 516 Shimonoseki, Japan, 492 Vladivostok, U.S.S.R., 453</p> <p>NIIHAMA, JAPAN (33°59'00" N., 133°16'00" E.) to:</p> <p>Ports Kagoshima, Japan, 318 Kobe, Japan, 113 Kure, Japan, 77 Osaka, Japan, 122 Shimonoseki, Japan, 137</p> <p>NIKOLAEVSK, U.S.S.R. See Nikolayevsk.</p> <p>NIKOLAYEVSK, U.S.S.R. (53°07'30" N., 140°43'00" E.) to:</p>	<p>Junction Points* Panama, Panama (via Unimak Pass), 7,296</p> <p>Ports Aleksandrovsk, U.S.S.R. (via South Channel), 162 Bukhta Broutona, Kuril Islands, 715 Ching-tao, China, 1,750 Hai-kou, Hai-nan Tao, 2,644 Hong Kong, B.C.C. (via South Channel), 2,394 Hsia-men, China (via South Channel), 2,138 Kasatka, Japan (via south of Sakhalin), 747 Kuang-chou, China, 2,486 Matsugahama, Japan, 741 Pago Pago, American Samoa (via Nemuro Strait and La Perouse Strait), 4,913 Reyd Urkt, U.S.S.R. (north of Sakhalin), 209 San Francisco, California, U.S.A. (via Unimak Pass), 4,099 Seattle, Washington, U.S.A. (via Unimak Pass), 3,748 Shang-hai, China, 1,742 Shelekhovo, Kuril Islands (north of Sakhalin), 677 Slavnoye, Kuril Islands (south of Sakhalin), 743 Sovetskaya Gaven, U.S.S.R. (via South Channel), 276 Ta-ku, China, 1,961 Tomari, Japan, 694 Yin-hsien, China (via Shih-peng Chiang and South Channel), 1,779 Zaliv Chikachova, U.S.S.R., 132</p> <p>NINGPO, CHINA. See Yin-hsien.</p> <p>NOME, ALASKA, U.S.A. (64°29'00" N., 165°25'00" W.) to:</p> <p>Junction Points* Panama, Panama, 5,834</p> <p>Ports Apra, Guam, 3,686 Auckland, New Zealand, 6,159 Barrow, Alaska, U.S.A., 566 Callao, Peru, 6,578 Cordova, Alaska, U.S.A., 1,409 Hakodate, Japan, 2,347 Hong Kong, B.C.C., 4,145 Honolulu, Hawaii, U.S.A. (via Unimak Pass), 2,674 Los Angeles, California, U.S.A., 2,968 Manila, Philippines, 4,379</p>
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*JUNCTION POINT.—See Preface for use of junction points.

Pago Pago, American Samoa, 4,748
 Petropavlovsk, U.S.S.R., 1,317
 Pevek, U.S.S.R., 700
 Prince Rupert, Canada, 1,846
 San Francisco, California, U.S.A., 2,636
 Sasebo, Japan (via Osumi Kaikyo), 3,373
 Seattle, Washington, U.S.A. (via Juan de Fuca Strait), 2,288
 Sydney, Australia, 6,280
 Valparaiso, Chile, 7,728
 Vancouver, Canada, 2,304
 Yokohama, Japan, 2,696

NONOUTI, GILBERT ISLANDS
 (0°43'00" S., 174°17'00" E.) to:

Junction Points*

Panama, Panama, 6,439

Ports

Apia, Samoa, 1,136
 Apra, Guam, 1,981
 Brisbane, Australia, 2,032
 Funafuti, Ellice Islands, 544
 Honolulu, Hawaii, U.S.A., 2,100
 Levuka, Fiji Islands, 1,162
 Ponape, Caroline Islands, 1,082
 Yokohama, Japan, 2,931

NONUTI, GILBERT ISLANDS. See Nonouti.

NORDENHAM, GERMANY
 (53°29'00" N., 8°29'40" E.)

Add 5½ miles to Bremerhaven distances.

NORD-OSTSEE-KANAL. See Kiel Canal.

NORFOLK, VIRGINIA, U.S.A.
 (36°51'00" N., 76°18'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 3,202
 Bishop Rock, England (track B), 3,168
 Bishop Rock, England (track C), 3,107
 Cape of Good Hope, Republic of South Africa, 6,802
 Fastnet, Ireland (track A), 3,109
 Fastnet, Ireland (track B), 3,072
 Fastnet, Ireland (track C), 3,002

Inishtrahull, Ireland (track A), 3,235
 Inishtrahull, Ireland (track B), 3,191
 Inishtrahull, Ireland (track C), 3,100
 Montreal, Canada (via Cabot Strait), 1,700
 Panama, Panama, 1,822
 Pentland Firth, Scotland (track A, eastbound), 3,449
 Pentland Firth, Scotland (track B, eastbound), 3,395
 Pentland Firth, Scotland (track C, eastbound), 3,280
 Punta Arenas, Chile, 6,900
 Strait of Gibraltar (track A), 3,349
 Strait of Gibraltar (track B), 3,340
 Strait of Gibraltar (direct), 3,335
 Straits of Florida (via outer route), 980
 Yucatan Channel, 1,165

Ports

Angmagssalik, Greenland (direct), 2,458
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,472
 Argentia, Canada, 1,189
 Arkhangelsk, U.S.S.R., 4,399
 Banes, Cuba (via Crooked Island Passage), 1,018
 Belem, Brazil, 2,832
 Belize, British Honduras, 1,503
 Bocas del Toro, Panama (via Crooked Island Passage and Windward Passage), 1,853
 Bordeaux, France (track A), 3,495
 Bordeaux, France (track B), 3,466
 Bordeaux, France (track C), 3,423
 Buenos Aires, Argentina, 5,824
 Cadiz, Spain (track A), 3,315
 Cadiz, Spain (track B), 3,306
 Cadiz, Spain (direct), 3,302
 Cape Town, Republic of South Africa, 6,790
 Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,658
 Castries, St. Lucia, 1,620
 Charlotte Amalie, Virgin Islands, 1,296
 Cienfuegos, Cuba (Windward Passage), 1,482
 Colon, Panama (via Crooked Island Passage and Windward Passage), 1,779
 Dakar, Senegal, 3,408
 Elizabeth Harbor, Bahamas, 848
 Fort de France, Martinique, 1,597
 Freetown, Sierra Leone, 3,821
 Funchail, Madeira Island, 2,907
 Georgetown, British Guiana, 2,090
 Guantanamo, Cuba, 1,117

Habana, Cuba (southbound, outside), 985
 Halifax, Canada, 790
 Hamilton, Bermuda, 683
 Ivigtut, Greenland, 2,116
 Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,279
 La Guaira, Venezuela, 1,687
 Lagos, Nigeria, 4,941
 Las Palmas de Gran Canaria, Canary Islands, 3,130
 Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 1,852
 Lisboa, Portugal (track A), 3,149
 Lisboa, Portugal (track B), 3,137
 Lisboa, Portugal (tracks C and D, eastbound), 3,128
 Liverpool, Canada, 724
 Livingston, Guatemala, 1,595
 Maracaibo, Venezuela, 1,682
 Montevideo, Uruguay, 5,710
 Nassau, Bahamas, 758
 Nuevitas, Cuba, 1,076
 Parrsboro, Canada, 784
 Pointe a Pitre, Guadeloupe, 1,527
 Ponta Delgada, Azores (track A), 2,402
 Ponta Delgada, Azores (direct), 2,401
 Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,228
 Port au Prince, Haiti, 1,178
 Port of Spain, Trinidad, 1,799
 Porto Grande, Cape Verde Islands, 2,971
 Puerto Barrios, Guatemala, 1,603
 Puerto Cortes, Honduras (via Straits of Florida), 1,568
 Puerto Mexico, Mexico, 1,736
 Recife, Brazil, 3,651
 Reykjavik, Iceland, 2,677
 Rio de Janeiro, Brazil, 4,723
 St. John, Canada, 731
 St. John's, Canada, 1,277
 Salvador, Brazil, 4,042
 San Juan, Puerto Rico, 1,252
 San Juan del Norte, Nicaragua (via Straits of Florida), 1,846
 San Juan del Norte, Nicaragua (via Windward Passage), 1,837
 Santa Cruz de Tenerife, Canary Islands, 3,057
 Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,588
 Santiago de Cuba, Cuba, 1,167
 Santo Domingo, Dominican Republic, 1,329
 Santos, Brazil, 4,910

*JUNCTION POINT.—See Preface for use of junction points.

Sint Nicolaas, Aruba (via Mona Passage), 1,600
 Sint Nicolaas, Aruba (via Windward Passage), 1,611
 Sydney, Canada, 996
 Takoradi, Ghana, 4,620
 Vigo, Spain (track A), 3,126
 Vigo, Spain (track B), 3,106
 Vigo, Spain (tracks C and D), 3,082
 Willemstad, Curacao, 1,611
 Yarmouth, Canada, 656

NORRKOPING, SWEDEN

(58°36'00" N., 16°12'54" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 459
 Skagens Odde, Denmark, 520

Ports

Helsinki, Finland, 307
 Riga, Latvia, 300
 Stockholm, Sweden, 143

NOUMEA, NEW CALEDONIA

(22°16'30" S., 166°27'00" E.) to:

Junction Points*

Panama, Panama, 6,982
 Punta Arenas, Chile (composite sailing with Lat. 49° S. the limiting latitude), 5,745
 Punta Arenas, Chile (via great circle), 5,527
 Torres Strait, Australia (via Raine Island entrance), 1,622

Ports

Apia, Samoa, 1,371
 Apra, Guam, 2,528
 Auckland, New Zealand, 998
 Avarua, Cook Islands, 1,887
 Baker Island, 1,707
 Bowen, Australia, 1,342
 Brisbane, Australia, 807
 Cairns Harbor, Australia, 1,250
 Callao, Peru, 6,541
 Ching-ao, China, 4,416
 Dunedin, New Zealand, 1,552
 Dutch Harbor, Alaska, U.S.A., 4,857
 Funafuti, Ellice Islands, 1,132
 Guayaquil, Ecuador, 6,686
 Hai-kou, Hai-nan Tao, 4,270
 Hakodate, Japan (via Canal Woodin and Canal de la Havannah), 4,176
 Hobart, Tasmania, 1,604
 Hong Kong, B.C.C., 4,107
 Honolulu, Hawaii, U.S.A., 3,371
 Hsia-men, China, 4,031
 Kodiak, Alaska, U.S.A., 5,281

Kuang-chou, China, 4,208
 Lae, New Guinea, 1,519
 Lele, Caroline Islands, 1,722
 Levuka, Fiji Islands, 776
 Los Angeles, California, U.S.A., 5,521
 Mackay, Australia, 1,253
 Malakal, Palau Islands, 2,612
 Manila, Philippines, 3,616
 Melbourne, Australia, 1,595
 Midway Island, 3,207
 Nagasaki, Japan (via Bougainville Strait), 3,967
 Nukualofa, Tonga Islands, 1,059
 Omura, Bonin Islands, 3,325
 Pago Pago, American Samoa (via Kandavu Passage), 1,416
 Palmyra Island, Pacific, 2,870
 Papeete, Society Islands, 2,497
 Petropavlovsk, U.S.S.R., 4,587
 Ponape, Caroline Islands, 1,892
 Port Augusta, Australia, 2,179
 Rabaul, New Britain, 1,383
 Raoul, Kermadec Islands, 957
 Rockhampton, Australia, 902
 Rotoava, Tuamotu Archipelago, 2,737
 San Diego, California, U.S.A., 5,491
 San Francisco, California, U.S.A., 5,410
 Seattle, Washington, U.S.A., 5,760
 Selwyn Bay, Solomon Islands, 850
 Shang-hai, China, 4,185
 Sitka, Alaska, U.S.A., 5,613
 Suva, Fiji Islands, 734
 Sydney, Australia, 1,069
 Taio Hae, Marquesas, 3,183
 Ta-ku, China, 4,667
 Talomako, New Hebrides, 524
 Townsville, Australia, 1,155
 Truk, Caroline Islands, 2,068
 Valparaiso, Chile, 6,115
 Vladivostok, U.S.S.R., 4,590
 Wake Island, Pacific, 2,551
 Wallaroo, Australia, 2,099
 Wotje Island, Marshall Islands, 1,972
 Yap Island, Caroline Islands, 2,568
 Yin-hsien, China (via Shih-peng Chiang), 4,118
 Yokohama, Japan (via Bougainville Strait), 3,837

NOVOROSSISK, U.S.S.R. See Novorossiysk.

NOVOROSIYSK, U.S.S.R.

(39°33'52" N., 2°38'17" E.) to:

Junction Points*

Port Said, U.A.R., 1,260
 Strait of Gibraltar (via Corinth Canal), 2,260

Strait of Gibraltar (south of Greece), 2,277

Ports

Batumi, U.S.S.R., 255
 Constanta, Rumania, 403
 Istanbul, Turkey, 460
 Odessa, U.S.S.R., 369
 Thessaloniki, Greece, 794

NUEVA GERONA, CUBA

(21°55'00" N., 82°48'00" W.)

Subtract 82 miles from Surgidero de Batabano distances.

NUEVITAS, CUBA

(21°32'40" N., 77°12'40" W.) to:

Junction Points*

Straits of Florida, 386
 Yucatan Channel, 528

Ports

Abraham Bay, Bahamas, 243
 Bahia de Samana, Dominican Republic, 510
 Baltimore, Maryland, U.S.A. (via Old Bahama Channel), 1,220
 Boston, Massachusetts, U.S.A. (via Old Bahama Channel and Santaren Channel), 1,545
 Caibarien, Cuba, 181
 Charleston, South Carolina, U.S.A., 750
 Cienfuegos, Cuba, 649
 Cockburn Town, Bahamas, 265
 Exuma Harbor, Bahamas, 287
 Fort de France, Martinique, 1,035
 Fort Liberte, Haiti, 339
 Gibara, Cuba, 82
 Grand Turk, Grand Turk Island, 368
 Guantanamo, Cuba, 284
 Habana, Cuba, 344
 Hamilton, Bermuda, 988
 Hopetown, Bahamas, 452
 Isabela, Cuba, 212
 Key West, Florida, U.S.A., 331
 Kingston, Jamaica, 448
 Mariel, Cuba, 366
 Miller Anchorage, Bahamas, 363
 Nassau, Bahamas, 454
 New York, New York, U.S.A. (via Straits of Florida), 1,299
 New York, New York, U.S.A. (via Crooked Island Passage), 1,274
 Nicaro, Cuba, 132
 Norfolk, Virginia, U.S.A. (via Old Bahama Channel), 1,098

*JUNCTION POINT.—See Preface for use of junction points.

Philadelphia, Pennsylvania, U.S.A.
(via Old Bahama Channel), 1,269
Port Antonio, Jamaica, 398
Port au Prince, Haiti, 348
Puerto Cayo Moa, Cuba, 154
St. Marc, Haiti, 306
San Juan, Puerto Rico, 663
Santa Lucia, Cuba, 447
Santo Domingo, Dominican Republic,
632

NUKUALOFA, TONGA ISLANDS
(21°07'30" S., 175°12'00" W.) to:

Junction Points*
Panama, Panama, 5,953

Ports
Apia, Samoa, 509
Apra, Guam, 3,202
Auckland, New Zealand, 1,099
Brisbane, Australia (via Main Chan-
nel and Howe Channel), 1,819
Honolulu, Hawaii, U.S.A., 2,749
Los Angeles, California, U.S.A.,
4,633
Noumea, New Caledonia, 1,059
Pago Pago, American Samoa, 490
Papeete, Society Islands, 1,468
Ponape, Caroline Islands, 2,341
Port Kembla, Australia, 1,987
Suva, Fiji Islands, 416

NYKOBING, DENMARK
(55°54'48" N., 11°40'42" E.)

Add 12 miles to Masnedsund dis-
tances.

NYSTAD, FINLAND. See Uusikau-
punkki.

OAKLAND, CALIFORNIA, U.S.A.
(37°48'12" N., 122°19'30" W.)

Add 3 miles to San Francisco dis-
tances.

OCEAN ISLAND, PACIFIC
(0°52'30" S., 169°35'00" E.) to:

Junction Points*
Panama, Panama, 6,724

Ports
Honolulu, Hawaii, U.S.A., 2,480
Los Angeles, California, U.S.A., 4,553

Pago Pago, American Samoa, 1,409
Papeete, Society Islands, 2,609
San Francisco, California, U.S.A.,
4,406
Seattle, Washington, U.S.A., 4,611
Suva, Fiji Islands, 1,207
Yokohama, Japan, 2,761

ODENSE, DENMARK
(55°24'40" N., 10°23'00" E.) to:

Junction Points*
Kiel Canal (east end), Germany, 117
Skagens Odde, Denmark, 126

Ports
Gdynia, Poland, 438
Stockholm, Sweden, 609
Swinoujscie, Poland, 293

ODESSA, U.S.S.R.
(46°29'47" N., 30°44'40" E.) to:

Junction Points*
Port Said, U.A.R., 1,152
Strait of Gibraltar (via Corinth
Canal), 2,152
Strait of Gibraltar (south of Greece),
2,169

Ports
Alexandria, U.A.R., 1,090
Alger, Algeria (via Corinth Canal),
1,724
Alger, Algeria (south of Greece), 1,741
Alicante, Spain (via Corinth Canal),
1,888
Alicante, Spain (south of Greece),
1,908
Ancona, Italy (via Corinth Canal),
1,310
Ancona, Italy (south of Greece), 1,407
Annaba, Algeria (via Corinth Canal),
1,499
Annaba, Algeria (south of Greece),
1,516
Banghazi, Libya, 1,064
Barcelona, Spain (via Corinth Canal),
1,793
Barcelona, Spain (south of Greece),
1,834
Bari, Italy (via Corinth Canal), 1,103
Bari, Italy (south of Greece), 1,200
Batumi, U.S.S.R., 569
Bayrut, Lebanon, 1,194
Bizerte, Tunisia (via Corinth Canal),
1,394
Bizerte, Tunisia (south of Greece),
1,411

Brindisi, Italy (via Corinth Canal),
1,045
Brindisi, Italy (south of Greece), 1,142
Cartagena, Spain (via Corinth Canal),
1,915
Cartagena, Spain (south of Greece),
1,932
Ceuta, Morocco (via Corinth Canal),
2,133
Ceuta, Morocco (south of Greece),
2,150
Civitavecchia, Italy (via Corinth
Canal), 1,414
Civitavecchia, Italy (south of Greece),
1,456
Constanta, Rumania, 186
Genova, Italy (via Corinth Canal),
1,598
Genova, Italy (south of Greece), 1,639
Gibraltar (via Corinth Canal), 2,135
Gibraltar (south of Greece), 2,152
Haifa, Israel, 1,197
Iraklion, Crete, 793
Istanbul, Turkey, 352
Izmir, Turkey, 640
La Spezia, Italy (via Corinth Canal),
1,562
La Spezia, Italy (south of Greece),
1,604
Livorno, Italy (via Corinth Canal),
1,527
Livorno, Italy (south of Greece), 1,568
Malga, Spain (via Corinth Canal),
2,083
Malga, Spain (south of Greece),
2,100
Marseille, France (via Corinth Canal),
1,690
Marseille, France (south of Greece),
1,731
Messina, Sicily (via Corinth Canal),
1,116
Messina, Sicily (south of Greece),
1,158
Napoli, Italy (via Corinth Canal),
1,288
Napoli, Italy (south of Greece), 1,329
Novorossiysk, U.S.S.R., 369
Oran, Algeria (via Corinth Canal),
1,921
Oran, Algeria (south of Greece), 1,938
Palermo, Sicily (via Corinth Canal),
1,232
Palermo, Sicily (south of Greece),
1,274
Palma, Balearic Islands (via Corinth
Canal), 1,751
Palma, Balearic Islands (south of
Greece), 1,792
Piraeus, Greece, 712

*JUNCTION POINT.—See Preface for use of junction points.

Rijeka, Yugoslavia (via Corinth Canal), 1,377
 Rijeka, Yugoslavia (south of Greece), 1,476
 Savona, Italy (via Corinth Canal), 1,608
 Savona, Italy (south of Greece), 1,650
 Sevastopol, U.S.S.R., 167
 Sibenik, Yugoslavia (via Corinth Canal), 1,250
 Sibenik, Yugoslavia (south of Greece), 1,349
 Siracusa, Sicily (via Corinth Canal), 1,120
 Siracusa, Sicily (south of Greece), 1,146
 Split, Yugoslavia (via Corinth Canal), 1,235
 Split, Yugoslavia (south of Greece), 1,334
 Tarabulus, Libya, 1,301
 Taranto, Italy (via Corinth Canal), 1,065
 Taranto, Italy (south of Greece), 1,154
 Thessaloniki, Greece, 686
 Toulon, France (via Corinth Canal), 1,658
 Toulon, France (south of Greece), 1,699
 Trieste, Free Territory (via Corinth Canal), 1,411
 Trieste, Free Territory (south of Greece), 1,510
 Tunis, Tunisia (via Corinth Canal), 1,382
 Tunis, Tunisia (south of Greece), 1,399
 Valencia, Spain (via Corinth Canal), 1,876
 Valencia, Spain (south of Greece), 1,906
 Valetta, Malta, 1,185
 Venezia, Italy (via Corinth Canal), 1,421
 Venezia, Italy (south of Greece), 1,518
 Volos, Greece, 677

OKHA, INDIA

(22°28'30" N., 69°05'15" E.) to:

Junction Points*

Port Said, U.A.R., 2,887

Ports

Bombay, India, 341
 Colombo, Ceylon, 1,183
 Karachi, Pakistan, 194
 Mormugao, India, 533

OLBIA, SARDINIA

(40°55'18" N., 9°31'24" E.) to:

Junction Points*

Port Said, U.A.R., 1,278
 Strait of Gibraltar, 828

Ports

Bizerte, Tunisia, 236
 Genova, Italy, 221
 Napoli, Italy, 222

OLONGAPO, PHILIPPINES

(14°49'00" N., 120°16'30" E.) to:

Junction Points*

Singapore, 1,335

Ports

Apra, Guam (north of Luzon), 1,663
 Hong Kong, B.C.C., 580
 Kuching, Sarawak, 992
 Pago Pago, American Samoa (via San Bernardino Strait), 4,622
 Sai Gon, Vietnam, 872

OLYMPIA, WASHINGTON, U.S.A.

(47°03'06" N., 122°54'18" W.)

Add 44 miles to Seattle distances.

OMURA, BONIN ISLANDS

(27°05'20" N., 142°11'40" E.) to:

Junction Points*

Panama, Panama, 7,766
 Punta Arenas, Chile, 8,765

Ports

Apia, Samoa, 3,641
 Apra, Guam, 834
 Auckland, New Zealand, 4,366
 Avarua, Cook Islands, 4,448
 Brisbane, Australia (via Bougainville Strait), 3,455
 Callao, Peru, 8,420
 Darwin, Australia (via Selat Sele), 2,549
 Dutch Harbor, Alaska, U.S.A., 2,853
 Hakodate, Japan, 915
 Hobart, Tasmania, 4,477
 Hong Kong, B.C.C., 1,590
 Honolulu, Hawaii, U.S.A., 3,283
 Lele, Caroline Islands, 1,772
 Levuka, Fiji Islands, 3,533
 Melbourne, Australia (via Bougainville Strait), 4,425
 Midway Island, Pacific, 2,149

Nagasaki, Japan (via Osumi Kaikyo), 786

Noumae, New Caledonia, 3,325
 Papeete, Society Islands, 4,792
 Petropavlovsk, U.S.S.R., 1,736
 Ponape, Caroline Islands, 1,519
 Port Moresby, Papua (via Torres Strait), 3,164
 Port Moresby, Papua (west of New Ireland and via China Strait), 2,712
 Rabaul, New Britain (via Steffen Strait), 2,007
 Saipan, Mariana Islands, 750
 San Diego, California, U.S.A., 5,063
 San Francisco, California, U.S.A., 4,688
 Seattle, Washington, U.S.A., 4,466
 Shang-hai, China, 1,130
 Sydney, Australia, 3,860
 Valparaiso, Chile, 9,023
 Vladivostok, U.S.S.R. (via Shimono-seki Kaikyo), 1,292
 Wake Island, 1,426
 Yokohama, Japan, 523

ONEGA, U.S.S.R.

(63°54'00" N., 38°06'00" E.)

Add 102 miles to Arkhangelsk distances.

OOSTENDE, BELGIUM

(51°14'00" N., 2°55'00" E.) to:

Junction Points*

Bishop Rock, England, 400
 Kiel Canal (east end), Germany, 364
 Pentland Firth, Scotland, 509
 Skagens Odde, Denmark, 489
 Ushant, France, 365

Ports

Aberdeen, Scotland, 406
 Amsterdam, Netherlands, 117
 Antwerpen, Belgium, 79
 Bergen, Norway, 563
 Bremerhaven, Germany, 299
 Cherbourg, France, 203
 Dundee, Scotland, 398
 Egersund, Norway, 447
 Emden, Germany, 242
 Esbjerg, Denmark, 328
 Hartlepool, England, 265
 Hull, England, 207
 Inverness, Scotland, 510
 Kristiansand, Norway, 453
 Le Havre, France, 168
 Leith, Scotland, 396
 London, England, 123
 Newcastle, England, 291
 Oslo, Norway, 596

*JUNCTION POINT.—See Preface for use of junction points.

Plymouth, England, 288
 Portland, England, 214
 Portsmouth, England, 174
 Rotterdam, Netherlands, 86
 Southampton, England, 192
 Stavanger, Norway, 488
 Wilhelmshaven, Germany, 286

OPORTO, PORTUGAL. See Porto.

ORAN, ALGERIA

(35°42'52" N., 0°38'00" W.) to:

Junction Points*

Port Said, U.A.R., 1,711
 Strait of Gibraltar, 252

Ports

Alcudia, Balearic Islands, 281
 Alexandria, U.A.R., 1,590
 Algeciras, Spain, 229
 Alger, Algeria, 205
 Alicante, Spain, 159
 Ancona, Italy, 1,349
 Annaba, Algeria, 444
 Banghazi, Libya, 1,124
 Barcelona, Spain, 365
 Bari, Italy, 1,142
 Bayrut, Lebanon, 1,803
 Bizerte, Tunisia, 538
 Brindisi, Italy, 1,084
 Cagliari, Sardinia, 525
 Cannes, France, 594
 Cartagena, Spain, 115
 Ceuta, Morocco, 232
 Civitavecchia, Italy, 703
 Genova, Italy, 686
 Gibraltar, 237
 Haifa, Israel, 1,800
 Iraklion, Crete, 1,284
 Istanbul, Turkey (via Corinth Canal), 1,573
 Istanbul, Turkey (south of Greece), 1,590
 Izmir, Turkey (via Corinth Canal), 1,418
 Izmir, Turkey (south of Greece), 1,436
 La Spezia, Italy, 701
 Livorno, Italy, 691
 Malaga, Spain, 195
 Marseille, France, 536
 Melilla, Morocco, 120
 Messina, Sicily, 818
 Napoli, Italy, 775
 Odessa, U.S.S.R. (via Corinth Canal), 1,921
 Odessa, U.S.S.R. (south of Greece), 1,938
 Palermo, Sicily, 709
 Palma, Balearic Islands, 281

Piraeus, Greece (via Corinth Canal), 1,219
 Piraeus, Greece (south of Greece), 1,276
 Pollenza, Balearic Islands, 346
 Rijeka, Yugoslavia, 1,417
 Savona, Italy, 672
 Sibenik, Yugoslavia, 1,290
 Siracusa, Sicily, 823
 Skikda, Algeria, 398
 Split, Yugoslavia, 1,275
 Tarabulus, Libya, 862
 Taranto, Italy, 1,037
 Tarragona, Spain, 336
 Thessaloniki, Greece (via Corinth Canal), 1,467
 Thessaloniki, Greece (south of Greece), 1,484
 Toulon, France, 545
 Trieste, Free Territory, 1,450
 Tunis, Tunisia, 589
 Valencia, Spain, 238
 Valletta, Malta, 774
 Venezia, Italy, 1,460
 Volos, Greece (via Corinth Canal), 1,408
 Volos, Greece (south of Greece), 1,426

ORANGE, TEXAS, U.S.A.

(30°05'20" N., 93°44'00" W.)

Add 20 miles to Port Arthur distances.

ORANJESTAD, ARUBA, NETHERLANDS WEST INDIES

(12°31'15" N., 70°02'45" W.) to:

Junction Points*

Panama, Panama, 661
 Yucatan Channel, 1,024

Ports

Barranquilla, Colombia, 506
 Kingston, Jamaica, 223
 La Guaira, Venezuela, 207

ORANJESTAD, ST. EUSTATIUS

(17°29'00" N., 62°59'00" W.) to:

Junction Points*

Straits of Florida, 1,207

Ports

Guantanamo, Cuba, 771
 Port of Spain, Trinidad, 432
 Puerto Cabezas, Nicaragua, 1,195
 San Juan, Puerto Rico, 195

ORMOS SOUDHAS, CRETE. See Soudha, Ormos Soudhas.

ORNSKOLDSVIK, SWEDEN

(63°16'37" N., 18°44'20" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 733
 Skagens Odde, Denmark, 798

Ports

Helsinki, Finland, 403
 Riga, Latvia, 461
 Stockholm, Sweden, 274

OSAKA, JAPAN

(34°38'00" N., 135°26'00" E.) to:

Junction Points*

Panama, Panama, 7,969

Ports

Aleksandrovsk, U.S.S.R., 1,394
 Inchon, Korea, 721
 Komatsushima, Japan, 58
 Mokpo, Korea, 544
 Niihama, Japan, 122
 Pago Pago, American Samoa, 4,307
 Petropavlovsk, U.S.S.R., 1,709
 Shimotsui, Japan, 116
 Vladivostok, U.S.S.R., 815
 Wonsan, Korea, 627
 Yokkaichi, Japan, 236
 Yokohama, Japan (via Kii Suido), 359

OSLO, NORWAY

(59°54'20" N., 10°44'00" E.) to:

Junction Points*

Bishop Rock, England, 947
 Pentland Firth, Scotland, 524
 Skagens Odde, Denmark, 131
 Ushant, France, 946

Ports

Aarhus, Denmark, 255
 Aberdeen, Scotland, 490
 Amsterdam, Netherlands, 522
 Antwerpen, Belgium, 630
 Arendal, Norway, 120
 Baltiysk, U.S.S.R. (via Store Baelt), 668
 Baltiysk, U.S.S.R. (via The Sound), 551
 Bergen, Norway, 378
 Bodo, Norway, 885
 Bremerhaven, Germany, 427
 Calais, France, 634
 Cherbourg, France, 784
 Dover, England, 640
 Dunkerque, France, 617
 Egersund, Norway, 238
 Emden, Germany, 451
 Esbjerg, Denmark, 341

*JUNCTION POINT.—See Preface for use of junction points.

Farsund, Norway, 198
 Flekkefjord, Norway, 219
 Fredrikstad, Norway, 57
 Gdansk, Poland (via Store Baelt), 657
 Gdansk, Poland (via The Sound), 540
 Goteborg, Sweden, 159
 Grimstad, Norway, 135
 Hakonsvern, Norway, 371
 Halmstad, Sweden, 225
 Halsingborg, Sweden, 250
 Hamburg, Germany, 461
 Hammerfest, Norway (outside route), 1,189
 Hammerfest, Norway (inner route), 1,187
 Helsingor, Denmark, 249
 Hirtshals, Denmark, 145
 Hull, England, 559
 Kalmar, Sweden (via Store Baelt), 596
 Kalmar, Sweden (via The Sound), 464
 Klaipeda, Lithuania (via Store Baelt and south of Bornholm), 716
 Klaipeda, Lithuania (via The Sound), 584
 Kobenhavn, Denmark, 272
 Kragero, Norway, 95
 Kristiansand, Norway, 163
 Kristiansund, Norway, 599
 Landskrona, Sweden, 261
 Larvik, Norway, 72
 Le Havre, France, 752
 Leith, Scotland, 546
 Leningrad, U.S.S.R. (via Store Baelt), 1,095
 Leningrad, U.S.S.R. (via The Sound), 963
 Liepaja, Latvia (via Store Baelt and south of Bornholm), 724
 Liepaja, Latvia (via Store Baelt and north of Bornholm), 721
 Liepaja, Latvia (via The Sound), 589
 Lillesand, Norway, 144
 Limhamn, Sweden, 279
 London, England, 650
 Longyearbyen, Svalbard, 1,482
 Lulea, Sweden (via Store Baelt), 1,195
 Lulea, Sweden (via The Sound), 1,063
 Malmo, Sweden, 278
 Mandal, Norway, 177
 Murmansk, U.S.S.R., 1,469
 Narvik, Norway, 988
 Newcastle, England, 528
 Oostende, Belgium, 596
 Plymouth, England, 869
 Portland, England, 795
 Portsmouth, England, 745
 Reykjavik, Iceland, 1,173
 Riga, Latvia (via Store Baelt), 871
 Riga, Latvia (via The Sound), 739

Risor, Norway, 106
 Ronne, Denmark (via Store Baelt), 491
 Rosyth, Scotland, 550
 Rotterdam, Netherlands, 554
 Sogndal, Norway, 228
 Southampton, England, 763
 Stavanger, Norway, 294
 Stockholm, Sweden (via Store Baelt), 819
 Stockholm, Sweden (via Sandhamnsleden), 689
 Stockholm, Sweden (via Huvudskar), 683
 Swinoujscie, Poland (via Store Baelt), 503
 Swinoujscie, Poland (via The Sound), 397
 Szczecin, Poland (via The Sound), 431
 Travemunde, Germany (via Store Baelt), 389
 Travemunde, Germany (via The Sound), 410
 Trelleborg, Sweden (via Store Baelt), 467
 Trelleborg, Sweden (via The Sound), 314
 Tromso, Norway, 1,069
 Trondheim, Norway, 688
 Turku, Finland (via Store Baelt), 892
 Turku, Finland (via The Sound), 764
 Tvedestrand, Norway, 121
 Uusikaupunki, Finland (via Store Baelt), 939
 Uusikaupunki, Finland (via The Sound), 808
 Vysotsk, U.S.S.R. (via Store Baelt), 1,047
 Vysotsk, U.S.S.R. (via The Sound), 925
 Wilhelmshaven, Germany, 421
 Zeebrugge, Belgium, 586

OSTENDE, BELGIUM. See Oostende.

OTARU, JAPAN
 (43°12'00" N., 141°01'00" E.) to:

Ports
 Bukhta Broutona, Kuril Islands, 597
 De-Kastri, U.S.S.R., 505
 Honto, U.S.S.R., 213
 Kasatka, Japan, 441
 Matsugahama, Japan, 435
 Rumoi, Japan, 57
 Shang-hai, China, 1,233
 Shelekhovo, Kuril Islands, 784
 Slavnoye, Kuril Islands, 442

Tomari, Japan, 387
 Unggi, Korea, 188

OTOMARI, SAKHALIN, U.S.S.R. See Korsakov.

OUESSANT, ILE D', FRANCE. See Ushant.

OULU, FINLAND
 (65°02'00" N., 25°23'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 918
 Skagens Odde, Denmark, 979

Ports
 Helsinki, Finland, 598
 Jakobstad, Finland, 133
 Stockholm, Sweden, 456

OXELOSUND, SWEDEN
 (58°39'52" N., 17°06'32" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 420
 Skagens Odde, Denmark, 481

Ports
 Gdynia, Poland, 266
 Helsinki, Finland, 268
 Klaipeda, Lithuania, 232

PAARDEN BAAI, ARUBA, NETHERLANDS WEST INDIES. See Oranjestad.

PADANG, INDONESIA
 (1°00'00" S., 100°22'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 4,979
 Singapore, 1,011
 Sunda Strait, Indonesia, 488

Ports
 Durban, Republic of South Africa, 4,307
 Penang, Malaysia, 931
 Tjilatjap, Indonesia, 738
 Trincomalee, Ceylon, 1,301

PAGODA ANCHORAGE, CHINA.
 See Lo-hsing-ta Mao-ti.

*JUNCTION POINT.—See Preface for use of junction points.

PAGO PAGO, AMERICAN SAMOA
 (14°16'30" S., 170°41'00" W.) to:

Junction Points*

Panama, Panama, 5,656
 Punta Arenas, Chile, 5,181
 Torres Strait, Australia (via Raine
 Island entrance), 2,848
 Wilson Promontory, Australia, 2,707

Ports

Acapulco, Mexico, 4,595
 Aleksandrovsk, U.S.S.R. (via Nemuro
 Strait and La Perouse Strait), 4,765
 Antofagasta, Chile, 5,604
 Aomori, Japan, 4,358
 Apia, Samoa, 80
 Apra, Guam, 3,156
 Auckland, New Zealand, 1,565
 Avarua, Cook Islands, 750
 Baie du Controleur, Marquesas, 1,835
 Brisbane, Australia, 2,221
 Butaritari, Gilbert Islands, 1,453
 Canton, Phoenix Islands, 711
 Chimbote, Peru, 5,389
 Ching-tao, China, 4,969
 Christmas Island, North Pacific, 1,256
 Dutch Harbor, Alaska, U.S.A., 4,132
 Guayaquil, Ecuador, 5,450
 Hai-kou, Hai-nan Tao, 5,130
 Hakodate, Japan, 4,326
 Hobart, Tasmania, 2,783
 Hong Kong, B.C.C., 4,948
 Honolulu, Hawaii, U.S.A., 2,276
 Howland Island, 989
 Hsia-men, China, 4,819
 Jaluit, Marshall Islands, 1,700
 Jarvis Island, 1,050
 Kobe, Japan, 4,308
 Kodiak, Alaska, U.S.A., 4,441
 Kuang-chou, China, 5,038
 Lele, Caroline Islands, 1,969
 Levuka, Fiji Islands, 643
 Los Angeles, California, U.S.A., 4,163
 Manila, Philippines, 4,519
 Melbourne, Australia, 2,851
 Midway Island, Pacific, 2,593
 Nagasaki, Japan, 4,489
 Nikolayevsk, U.S.S.R. (via Nemuro
 Strait and La Perouse Strait), 4,913
 Nome, Alaska, U.S.A., 4,748
 Noumea, New Caledonia (via Kandavu
 Passage), 1,416
 Nukualofa, Tonga Islands, 490
 Ocean Island, 1,409
 Olongapo, Philippines (via San Ber-
 nardino Strait), 4,622
 Osaka, Japan, 4,307
 Palmyra Island, 1,320
 Papeete, Society Islands, 1,236
 Petropavlovsk, U.S.S.R., 4,350
 Ponape, Caroline Islands, 2,266
 Portland, Oregon, U.S.A., 4,525
 Prince Rupert, Canada, 4,652
 Pusan, Korea (via Bungo Suido), 4,561
 Sai Gon, Vietnam, 5,216
 Salina Cruz, Mexico, 4,839
 San Diego, California, U.S.A., 4,176
 San Francisco, California, U.S.A.,
 4,150
 Seattle, Washington, U.S.A., 4,611
 Seward, Alaska, U.S.A., 4,589
 Shang-hai, China (via Tokara Kai-
 kyo), 4,794
 Shimonoseki, Japan, 4,440
 Sitka, Alaska, U.S.A., 4,635
 Suva, Fiji Islands, 688
 Sydney, Australia, 2,377
 Ta-ku, China, 5,194
 Ta-lien, China, 5,035
 Teluk Kau, Halmahera, 3,819
 Truk, Caroline Islands, 2,603
 Valparaiso, Chile, 5,378
 Vancouver, Canada, 4,637
 Victoria, Canada, 4,563
 Vladivostok, U.S.S.R., 4,739
 Wake Island, 2,436
 Wellington, New Zealand, 1,847
 Wonsan, Korea, 4,816
 Wotje Island, Marshall Islands, 1,856
 Yin-hsien, China (via Shih-peng
 Chiang), 4,757
 Yokohama, Japan, 4,135

PALEMBANG, INDONESIA

(3°00'00" S., 104°45'00" E.) to:

Junction Points*

Singapore, 304
 Sunda Strait, Indonesia, 362

Ports

Djakarta, Indonesia, 358
 Sai Gon, Vietnam, 869
 Surabaya, Indonesia, 638

PALERMO, SICILY, ITALY

(38°07'43" N., 13°22'12" E.) to:

Junction Points*

Port Said, U.A.R., 1,061
 Strait of Gibraltar, 940

Ports

Alexandria, U.A.R., 950
 Algeciras, Spain, 924
 Alger, Algeria, 513
 Alicante, Spain, 667
 Ancona, Italy, 652
 Annaba, Algeria, 292
 Augusta, Sicily, 187
 Banghazi, Libya, 547
 Barcelona, Spain, 574

Bari, Italy, 445
 Bayrut, Lebanon, 1,143
 Bizerte, Tunisia, 192
 Brindisi, Italy, 387
 Cagliari, Sardinia, 221
 Cartagena, Spain, 697
 Castellamare di Stabia, Italy, 168
 Catania, Sicily, 170
 Ceuta, Morocco, 921
 Civitavecchia, Italy, 253
 Genova, Italy, 431
 Gibraltar, 922
 Haifa, Israel, 1,139
 Iraklion, Crete, 626
 Istanbul, Turkey (via Corinth Canal),
 884
 Istanbul, Turkey (south of Greece),
 926
 Izmir, Turkey (via Corinth Canal),
 730
 Izmir, Turkey (south of Greece), 772
 La Spezia, Italy, 395
 Livorno, Italy, 359
 Malaga, Spain, 870
 Marseille, France, 495
 Messina, Sicily, 120
 Napoli, Italy, 170
 Odessa, U.S.S.R. (via Corinth Canal),
 1,232
 Odessa, U.S.S.R. (south of Greece),
 1,274
 Oran, Algeria, 709
 Palma, Balearic Islands, 531
 Piraeus, Greece (via Corinth Canal),
 531
 Piraeus, Greece (south of Greece),
 612
 Porto di Milazzo, Sicily, 97
 Porto di Reggio Calabria, Sicily, 124
 Rijeka, Yugoslavia, 719
 Salerno, Italy, 167
 Savona, Italy, 434
 Sibenik, Yugoslavia, 593
 Siracusa, Sicily, 192
 Split, Yugoslavia, 578
 Taormina, Sicily, 147
 Tarabulus, Libya, 460
 Taranto, Italy, 339
 Terracina, Italy, 191
 Thessaloniki, Greece (via Corinth
 Canal), 779
 Thessaloniki, Greece (south of
 Greece), 820
 Toulon, France, 464
 Trieste, Free Territory, 753
 Tunis, Tunisia, 193
 Valencia, Spain, 656
 Valletta, Malta, 242
 Venezia, Italy, 763
 Villa San Giovanni, Italy, 118
 Volos, Greece (via Corinth Canal), 720
 Volos, Greece (south of Greece), 761

*JUNCTION POINT.—See Preface for use of junction points.

PALMA, BALEARIC ISLANDS
(39°33'52" N., 2°38'17" E.) to:

Junction Points*
Port Said, U.A.R., 1,555
Strait of Gibraltar, 471

Ports
Alexandria, U.A.R., 1,435
Alicante, Spain, 173
Almeria, Spain, 308
Ancona, Italy, 1,170
Annaba, Algeria, 307
Banghazi, Libya, 970
Barcelona, Spain, 140
Bari, Italy, 963
Bayrut, Lebanon, 1,648
Bejaia, Algeria, 212
Bizerte, Tunisia, 384
Brindisi, Italy, 905
Cannes, France, 357
Cartagena, Spain, 222
Ceuta, Morocco, 452
Genova, Italy, 448
Gibraltar, 453
Golfe-Juan, France, 365
Haifa, Israel, 1,645
Iraklion, Crete, 1,130
Istanbul, Turkey (via Corinth Canal), 1,403
Istanbul, Turkey (south of Greece), 1,446
Izmir, Turkey (via Corinth Canal), 1,248
Izmir, Turkey (south of Greece), 1,290
La Spezia, Italy, 474
Livorno, Italy, 470
Malaga, Spain, 401
Marseille, France, 300
Mentone, France, 382
Messina, Sicily, 639
Monaco, Monaco, 377
Napoli, Italy, 582
Odessa, U.S.S.R. (via Corinth Canal), 1,751
Odessa, U.S.S.R. (south of Greece), 1,792
Oran, Algeria, 281
Palermo, Sicily, 531
Piraeus, Greece (via Corinth Canal), 1,049
Piraeus, (south of Greece), 1,131
Rijeka, Yugoslavia, 1,238
St. Raphael, France, 347
Sant Antioco Ponti, Sardinia, 298
Savona, Italy, 433
Sibenik, Yugoslavia, 1,112
Siracusa, Sicily, 668
Split, Yugoslavia, 1,096
Tarabulus, Libya, 708
Taranto, Italy, 858
Tarragona, Spain, 134

Thessaloniki, Greece (via Corinth Canal), 1,297
Thessaloniki, Greece (south of Greece), 1,339
Toulon, France, 308
Trieste, Free Territory, 1,271
Tunis, Tunisia, 435
Valencia, Spain, 146
Valletta, Malta, 619
Venezia, Italy, 1,281
Volos, Greece (via Corinth Canal), 1,238
Volos, Greece (south of Greece), 1,280

PALMYRA ISLAND, NORTH PACIFIC
(5°52'30" N., 162°08'00" W.) to:

Junction Points*
Panama, Panama, 4,994
Singapore, 5,741
Torres Strait, Australia (via Raine Island entrance), 3,593

Ports
Apra, Guam, 3,194
Auckland, New Zealand, 2,875
Baie du Controleur, Marquesas, 1,608
Canton, Phoenix Islands, 775
Ching-tao, China, 4,660
Christmas Island, North Pacific, 368
Dutch Harbor, Alaska, U.S.A., 2,918
Guayaquil, Ecuador, 5,007
Hai-kou, Hai-nan Tao, China, 5,147
Hong Kong, B.C.C., 4,922
Honolulu, Hawaii, U.S.A., 959
Johnston Island, 783
Kahului, Hawaii, U.S.A., 1,010
Kodiak, Alaska, U.S.A., 3,162
Los Angeles, California, U.S.A., 2,959
Manila, Philippines (via San Bernardino Strait), 4,675
Midway Island, 1,602
Noumea, New Caledonia, 2,870
Pago Pago, American Samoa, 1,320
Papeete, Society Islands, 1,590
Pearl Harbor, Hawaii, U.S.A., 960
Sai Gon, Vietnam (via San Bernardino Strait), 5,480
San Diego, California, U.S.A., 2,983
San Francisco, California, U.S.A., 2,892
Seattle, Washington, U.S.A., 3,307
Shang-hai, China, 4,540
Sitka, Alaska, U.S.A., 3,323
Surabaya, Indonesia, 5,263
Suva, Fiji Islands, 1,864
Sydney, Australia, 3,561
Talo Hae, Marquesas, 1,596
Truk, Caroline Islands, 2,747
Valparaiso, Chile, 5,621

Vladivostok, U.S.S.R., 4,136
Wake Island, 1,996
Yokohama, Japan, 3,680

PANAMA, PANAMA*
(8°53'00" N., 79°31'00" W.) to:

Junction Points*
Bishop Rock, England (via Mona Passage), 4,388
Montreal, Canada, 3,204
Punta Arenas, Chile, 3,932
Singapore (via San Bernardino Strait), 10,505
Strait of Gibraltar (via Anegada Channel), 4,351
Torres Strait, Australia (via Raine Island entrance), 8,451
Wilson Promontory, Australia (via Foveaux Strait), 7,770
Wilson Promontory, Australia (via Cook Strait), 7,842
Yucatan Channel, 855

Ports
Abraham Bay, Bahamas, 922
Acajutla, El Salvador, 833
Acapulco, Mexico, 1,426
Almirante, Panama, 198
Alvaro Obregon, Mexico, 1,361
Amapala, Honduras, 745
Amuay, Venezuela, 678
Angra dos Reis, Brazil, 4,527
Antilla, Cuba, 887
Antofagasta, Chile, 2,140
Apalachicola, Florida, U.S.A., 1,330
Apia, Samoa, 5,710
Apra, Guam, 7,988
Archipelago de Colon, 864
Arica, Chile, 1,921
Auckland, New Zealand, 6,516
Avarua, Cook Islands, 5,092
Bahia Blanca, Argentina, 5,776
Bahia de Samana, Dominican Republic, 1,015
Bahia Magdalena, Mexico, 2,265
Baie du Controleur, Marquesas, 3,823
Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,944
Barahona, Dominican Republic, 796
Barbers Point, Hawaii, U.S.A., 4,694
Barcelona, Venezuela, 1,014
Barrow, Alaska, U.S.A., 6,383
Belize, British Honduras, 859
Bikini, Marshalls, 4,915
Bluefields, Nicaragua, 319
Bocas del Toro, Panama, 187
Bordeaux, France (via Mona Passage), 4,641

*JUNCTION POINT.—See Preface for use of junction points.

Boston, Massachusetts, U.S.A. (Nantucket Light Vessel, and via Crooked Island Passage and Windward Passage), 2,200	Golfito, Costa Rica, 334	Maldonado, Uruguay, 5,352
Bridgeport, Connecticut, U.S.A., 2,118	Gonaives, Haiti, 805	Manila, Philippines (via Balintang Channel), 9,347
Bridgetown, Barbados, 1,280	Grand Turk, Grand Turk Island, 947	Manila, Philippines (via San Bernardino Strait), 9,370
Brisbane, Australia, 7,687	Guantanamo, Cuba, 732	Manzanillo, Cuba, 732
Brunswick, Georgia, U.S.A., 1,581	Guayaquil, Ecuador, 824	Maracaibo, Venezuela, 737
Buenaventura, Colombia, 352	Guaymas, Mexico, 2,370	Mar del Plata, Argentina, 5,543
Butaritari, Gilbert Islands, 6,515	Guiria, Venezuela, 1,200	Matagorda Bay, Texas, U.S.A., 1,558
Cabedelo, Brazil, 3,149	Gulfport, Mississippi, U.S.A. (northbound), 1,431	Matarani, Peru, 1,790
Caibarien, Cuba, 1,138	Hai-kou, Hai-nan Tao, China, 9,359	Mazatlan, Mexico, 2,006
Caldera, Chile, 2,302	Haina, Dominican Republic, 845	Melbourne, Australia (via Foveaux Strait), 7,928
Caldera Bay, Dominican Republic, 810	Hakodate, Japan, 7,417	Midway Island, 5,707
Caleta Olivia, Argentina, 6,204	Halifax, Canada, 2,338	Miller Anchorage, Bahamas, 1,115
Callao, Peru, 1,350	Hamilton, Bermuda, 1,702	Mollendo, Peru, 1,796
Campeche, Mexico, 1,210	Hilo, Hawaii, U.S.A., 4,527	Montecristi, Dominican Republic, 881
Canton, Phoenix Islands, 5,623	Hobart, Tasmania, 7,630	Monterey, California, U.S.A., 3,165
Cap Haitien, Haiti, 860	Hong Kong, B.C.C., 9,195	Montevideo, Uruguay, 5,379
Cape Town, Republic of South Africa, 6,508	Honolulu, Hawaii, U.S.A., 4,685	Nagasaki, Japan (east of Honshu), 8,200
Carmen, Mexico, 1,289	Hopetown, Bahamas, 1,203	Nagasaki, Japan (west of Honshu), 8,299
Cartagena, Colombia, 324	Hot Springs Bay, Alaska, U.S.A., 5,653	Naknek, Alaska, U.S.A., 5,604
Carupano, Venezuela, 1,083	Hsia-men, China (via Osumi Kaikyo), 8,943	Nassau, Bahamas (via Windward Passage), 1,210
Casilda, Cuba, 792	Hsia-men, China (via Tsugaru Kaikyo), 8,959	New Amsterdam, British Guiana, 1,581
Castries, St. Lucia, 1,203	Iloilo, Philippines, 9,235	New Haven, Connecticut, U.S.A., 2,106
Catia la Mar, Venezuela, 873	Inchon, Korea, 8,474	New Orleans, Louisiana, U.S.A. (northbound via South Pass), 1,444
Cayenne, French Guiana, 2,308	Iquique, Chile, 1,987	New York, New York, U.S.A. (via Windward Passage and Crooked Island Passage), 2,018
Champerico, Guatemala, 954	Isabel Segunda, Isla de Vieques, 1,060	Newcastle, Australia, 7,654
Charleston, South Carolina, U.S.A., 1,607	Isla de Pascua, Pacific, 2,785	Nicaragua, Cuba, 881
Charlotte Amalie, Virgin Islands, 1,072	Jacksonville, Florida, U.S.A., 1,559	Nikolayevsk, U.S.S.R. (south of Aleutian Islands), 7,293
Charlottetown, Canada, 2,578	Jacmel, Haiti, 726	Nikolayevsk, U.S.S.R. (via Unimak Passage), 7,296
Chimbote, Peru, 1,158	Jaluit, Marshall Islands, 6,666	Nome, Alaska, U.S.A., 5,834
Ching-ao, China, 8,575	Jarvis Island, 1,173	Nonouti, Gilbert Islands, 6,439
Christmas Island, North Pacific, 4,751	Jeremi, Haiti, 713	Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,822
Cienfuegos, Cuba, 815	Johnston Island, 5,359	Noumea, New Caledonia, 6,982
Cockburn Town, Bahamas, 1,017	Kahului, Hawaii, U.S.A., 4,605	Nukualofa, Tonga Islands, 5,953
Colon, Panama, 44	Kaneohe Bay, Hawaii, U.S.A., 4,686	Ocean Island, 6,724
Comodoro Rivadavia, Argentina, 6,185	Kaunakakai, Hawaii, U.S.A., 4,633	Omura, Japan, 7,766
Coquimbo, Chile, 2,448	Key West, Florida, U.S.A., 1,108	Oranjestad, Aruba, 661
Corinto, Nicaragua, 683	Kingston, Jamaica, 594	Osaka, Japan, 7,969
Corral, Chile, 2,983	Kobe, Japan, 7,964	Pago Pago, American Samoa, 5,656
Covenas, Cuba, 308	Kodiak, Alaska, U.S.A., 4,907	Palmyra Island, 4,994
Dakar, Senegal, 3,738	Kuang-chou, China, 9,201	Papeete Society Islands, 4,493
Dutch Harbor, Alaska, U.S.A., 5,246	La Ceiba, Honduras, 709	Paramaribo, Surinam, 1,691
Enderbury Island, Phoenix Islands, 5,599	La Guaira, Venezuela, 884	Paranagua, Brazil, 4,607
Eniwetok, Marshall Islands, 7,086	La Libertad, Ecuador, 674	Pearl Harbor, Hawaii, U.S.A., 4,692
Ensenada, Mexico, 2,791	La Libertad, El Salvador, 806	Pedernales, Venezuela, 1,224
Esmeraldas, Ecuador, 472	La Libertad, Mexico, 2,534	Pedregal, Panama, 308
Exuma Harbor, Bahamas, 1,039	La Palma, Panama, 104	Petropavlovsk, U.S.S.R., 6,492
Fanning Island, 4,805	La Romana, Dominican Republic, 889	
Fort de France, Martinique, 1,202	La Union, El Salvador, 748	
Fort Liberte, Haiti, 881	Lele, Caroline Islands, 7,059	
Frederikshaab, Greenland, 3,558	Les Cayes, Haiti, 688	
Funafuti Island, Ellice Islands, 6,217	Levuka, Fiji Islands, 6,288	
Galveston, Texas, U.S.A., 1,536	Limon, Costa Rica, 234	
Georgetown, British Guiana, 1,558	Livingston, Guatemala, 815	
	Los Angeles, California, U.S.A., 2,913	
	Lota, Chile, 2,825	
	Makasar, Celebes (via Selat Sagewin and Selat Salajar), 9,855	
	Malakal, Palau Islands, 8,674	

*JUNCTION POINT.—See Preface for use of junction points.

Philadelphia, Pennsylvania, U.S.A.
(via Windward Passage and Crooked Island Passage), 1,989
Pisagua, Chile, 1,962
Pisco, Peru, 1,458
Pointe a Pitre, Guadeloupe, 1,211
Ponape, Caroline Islands, 7,321
Ponce, Puerto Rico, 976
Port Antonio, Jamaica, 625
Port au Prince, Haiti, 817
Port Gallegos, Argentina, 6,455
Port Hueneme, California, U.S.A., 2,958
Port of Spain, Trinidad, 1,202
Port Pirie, Australia, 8,467
Port Plata, Dominican Republic, 942
Portland, Maine, U.S.A. (Nantucket Light Vessel, via Crooked Island Passage and Windward Passage), 2,241
Portland, Oregon, U.S.A., 3,869
Porto Alegre, Brazil, 5,148
Prince Rupert, Canada, 4,303
Progreso, Mexico, 1,069
Puerto Armuelles, Panama, 306
Puerto Barrios, Guatemala, 823
Puerto Cabello, Venezuela, 845
Puerto Cabezas, Nicaragua, 390
Puerto Cayo Moa, Cuba, 853
Puerto Colombia, Colombia, 358
Puerto Concepcion, Argentina, 6,067
Puerto Cortez, Honduras, 776
Puerto Cumarebo, Venezuela, 740
Puerto Descado, Argentina, 6,222
Puerto de Hierro, Venezuela, 1,192
Puerto la Cruz, Venezuela, 1,016
Puerto Madryn, Argentina, 6,012
Puerto Manati, Cuba, 959
Puerto Masachapa, Nicaragua, 619
Puerto Mexico, Mexico, 1,420
Puerto Montt, Chile, 3,177
Puerto Padre, Cuba, 948
Puerto Somoza, Nicaragua, 649
Puerto Sucre, Venezuela, 1,035
Puerto Tanamo, Cuba, 869
Puerto Vita, Cuba, 915
Punta Cardon, Venezuela, 674
Puntarenas, Costa Rica, 471
Quepos, Costa Rica, 415
Quequen, Argentina, 5,202
Rabaul, New Britain, 7,807
Raoul Island, Kermadec Islands, 6,125
Rio Grande, Argentina, 6,513
Rio Yateras, Cuba, 743
Rongelap, Marshall Islands, 4,843
Roosevelt Roads, Puerto Rico, 1,054
Rotoava, Tuamotu Archipelago, 4,256
Sai Gon, Vietnam, 10,017
St. Georges, Grenada, 1,161
St. John, Canada, 2,361
St. John's, Canada, 2,742

St. Louis, Marie Galante, 1,850
St. Marc, Haiti, 796
Salaverry, Peru, 1,109
Salina Cruz, Mexico, 1,170
Salvador, Brazil, 3,741
San Antonio, Chile, 2,644
San Blas, Mexico, 1,914
San Diego, California, U.S.A., 2,843
San Felix, Venezuela, 1,535
San Fernando, Trinidad, 1,202
San Francisco, California, U.S.A., 3,245
San Jose, Guatemala, 886
San Juan, Peru, 1,590
San Juan, Puerto Rico, 1,036
San Juan del Norte, Nicaragua, 289
San Juan del Sur, Nicaragua, 590
San Lorenzo, Honduras, 762
Sanchez, Dominican Republic, 1,024
Sand Bay, Alaska, U.S.A., 5,569
Santa Barbara, California, U.S.A., 2,980
Santa Barbara de Samana, Dominican Republic, 1,007
Santa Cruz del Sur, Cuba, 731
Santa Maria, Cuba, 814
Santa Rosalia, Mexico, 2,390
Santiago de Cuba, Cuba, 726
Santo Domingo, Dominican Republic, 846
Santos, Brazil, 4,609
Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,606
Seattle, Washington, U.S.A., 4,020
Selwyn Bay, Solomon Islands, 7,248
Seward, Alaska, U.S.A., 4,916
Shang-hai, China (via Tsugaru Kaikyo), 8,566
Shang-hai, China (Osumi Kaikyo), 8,648
Shimonoseki, Japan (east of Honshu), 8,153
Shimonoseki, Japan (west of Honshu), 8,081
Sitka, Alaska, U.S.A., 4,524
Skagway, Alaska, U.S.A., 4,739
Surgidero de Batabano, Cuba, 970
Suva, Fiji Islands, 6,325
Swan Island, 605
Sweeper Cove, Alaska, U.S.A., 5,586
Sydney, Australia, 7,674
Taio Hae, Marquesas, 3,826
Ta-ku, China (via Tsugaru Kaikyo), 8,786
Ta-ku, China (via Osumi Kaikyo), 9,002
Talara, Peru, 826
Talcahuano, Chile, 2,805
Ta-lien, China (via Tsugaru Kaikyo), 8,627

Ta-lien, China (via Osumi Kaikyo), 8,843
Taltal, Chile, 2,225
Tampico, Mexico, 1,528
Tela, Honduras, 749
Tocopilla, Chile, 2,068
Truk, Caroline Islands, 7,685
Turiamo, Venezuela, 858
Tuxpan, Mexico, 1,498
Unalakleet, Alaska, U.S.A., 5,967
Valparaiso, Chile, 2,616
Vancouver, Canada, 4,032
Veracruz, Mexico, 1,463
Victoria, Canada, 3,962
Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 7,833
Vladivostok, U.S.S.R. (south of Aleutian Islands, and La Perouse Strait), 7,739
Vladivostok, U.S.S.R. (north of Aleutian Islands, and La Perouse Strait), 7,757
Vladivostok, U.S.S.R. (November-March), 8,340
Wake Island, 6,673
Washington, D.C., U.S.A., 1,957
Wellington, New Zealand, 6,505
Whittier, Alaska, U.S.A., 4,958
Willemstad, Curacao, 742
Wilmington, North Carolina, U.S.A., 1,656
Wonsan, Korea, 8,038
Wotho, Marshall Islands, 4,882
Yin-hsien, China (via Shih-peng Chiang), 8,604
Yokohama, Japan, 7,682
Zamboanga, Philippines, 9,431

PANSIO, FINLAND (60°26'12" N., 22°08'54" E.)

Use Turku distances.

PAPEETE, TAHITI, SOCIETY ISLANDS (17°32'00" S., 149°34'00" W.) to:

Junction Points*
Panama, Panama, 4,493
Punta Arenas, Chile, 4,233
Torres Strait, Australia (via Raine Island entrance), 4,043
Wilson Promontory, Australia, 3,546

Ports
Acapulco, Mexico, 3,595
Apia, Samoa, 1,301
Apra, Guam, 4,335
Auckland, New Zealand, 2,216
Avarua, Cook Islands, 618

*JUNCTION POINT.—See Preface for use of junction points.

Baie du Controleur, Marquesas, 765
 Brisbane, Australia, 3,234
 Butaritari, Gilbert Islands, 2,560
 Callao, Peru, 4,192
 Canton, Phoenix Islands, 1,581
 Chimbote, Peru, 4,157
 Ching-tao, China, 6,046
 Christmas Island, North Pacific, 1,266
 Dutch Harbor, Alaska, U.S.A., 4,400
 Funafuti, Ellice Islands, 1,910
 Guayquil, Ecuador, 4,237
 Hai-kou, Hai-nan Tao, China, 6,327
 Hakodate, Japan, 5,249
 Hobart, Tasmania, 3,563
 Hong Kong, B.C.C., 6,132
 Honolulu, Hawaii, U.S.A., 2,381
 Hsia-men, China, 6,001
 Johnston Island, 2,371
 Kodiak, Alaska, U.S.A., 4,532
 Kuang-chou, China, 6,227
 Levuka, Fiji Islands, 1,831
 Los Angeles, California, U.S.A., 3,571
 Manila, Philippines, 5,728
 Melbourne, Australia, 3,691
 Midway Island, 3,190
 Nagasaki, Japan, 5,572
 Noumea, New Caledonia, 2,497
 Nukualofa, Tonga Islands, 1,468
 Ocean Island, 2,609
 Omura, Bonin Islands, 4,792
 Pago Pago, American Samoa, 1,236
 Palmyra Island, 1,590
 Petropavlovsk, U.S.S.R., 5,009
 Ponape, Caroline Islands, 3,430
 Rabaul, New Britain, 3,527
 Raoul Island, Kermadec Islands, 1,706
 Rotoava, Tuamotu Archipelago, 244
 Sai Gon, Vietnam, 6,443
 San Diego, California, U.S.A., 3,554
 San Francisco, California, U.S.A., 3,663
 Seattle, Washington, U.S.A., 4,296
 Seward, Alaska, U.S.A., 4,661
 Shang-hai, China, 5,907
 Sitka, Alaska, U.S.A., 4,537
 Suva, Fiji Islands, 1,838
 Sydney, Australia, 3,308
 Taio Hae, Marquesas, 761
 Ta-ku, China, 6,281
 Truk, Caroline Islands, 3,788
 Valparaiso, Chile, 4,254
 Vladivostok, U.S.S.R., 5,663
 Wake Island, 3,401
 Wellington, New Zealand, 2,348
 Yap Island, Caroline Islands, 4,585
 Yin-hsien, China (via Shih-peng Chiang), 5,875
 Yokohama, Japan, 5,140

PAPHOS, CYPRUS

(34°44'30" N., 32°24'00" E.) to:

Junction Points*

Port Said, U.A.R., 482
 Strait of Gibraltar, 1,872

Ports

Alexandria, U.A.R., 256
 Haifa, Israel, 449
 Iraklion, Crete, 363

PARA, BRAZIL. See Belem.

PARAMARIBO, SURINAM

(5°49'20" N., 55°09'00" W.) to:

Junction Points*

Bishop Rock, England, 3,602
 Fastnet, Ireland, 3,554
 Montreal, Canada (via Strait of Can-
 so), 3,150
 Panama, Panama, 1,691
 Strait of Gibraltar, 3,275
 Straits of Florida (via Mona Passage),
 2,014
 Ushant, France, 3,613

Ports

Baltimore, Maryland, U.S.A., 2,321
 Belem, Brazil, 747
 Boston, Massachusetts, U.S.A., 2,380
 Bridgetown, Barbados, 496
 Buenos Aires, Argentina, 3,813
 Cayenne, French Guiana, 224
 Dakar, Senegal, 2,315
 Georgetown, British Guiana, 215
 Hamilton, Bermuda, 1,694
 La Guaira, Venezuela, 832
 Natal, Brazil, 1,476
 New York, New York, U.S.A., 2,334
 Philadelphia, Pennsylvania, U.S.A.,
 2,327
 Pointe a Pitre, Guadeloupe, 737
 Port of Spain, Trinidad, 546
 Puerto Cabello, Venezuela, 887
 Rio de Janeiro, Brazil, 2,713
 St. Georges, Grenada, 560
 St. John's, Canada, 2,518
 Willemstad, Curacao, 955
 Wilmington, North Carolina, U.S.A.,
 2,148

PARANAGUA, BRAZIL

(25°30'00" S., 48°31'00" W.) to:

Junction Points*

Cape of Good Hope, Republic of South
 Africa, 3,496
 Panama, Panama, 4,607
 Punta Arenas, Chile, 2,001

Ports

Montevideo, Uruguay, 797
 Santos, Brazil, 163

PARANAM, SURINAM

(5°36'30" N., 55°05'12" W.)

Add 21 miles to Paramaribo distances.

PARRSBORO, CANADA

(45°22'00" N., 64°18'00" W.) to:

Ports

Boston, Massachusetts, U.S.A., 349
 Halifax, Canada, 330
 New York, New York, U.S.A., 591
 Norfolk, Virginia, U.S.A., 784
 Philadelphia, Pennsylvania, U.S.A.,
 743
 St. John, Canada, 80
 Sydney, Canada, 545

PASAJES DE SAN JUAN, SPAIN.

See Puerto de Pasajes.

PASO, CHINA. See Chang-kan.

PA-SO-TAN, CHINA. See Chang-
 kan.

PASUO, CHINA. See Chang-kan.

PATRAI, GREECE

(38°15'08" N., 21°43'53" E.) to:

Junction Points*

Port Said, U.A.R. (via Corinth Canal),
 690
 Port Said, U.A.R. (south of Greece),
 762
 Strait of Gibraltar, 1,350

Ports

Civitavecchia, Italy, 612
 Constanta, Rumania (via Corinth
 Canal), 653
 Constanta, Rumania (south of
 Greece), 811
 Derince, Turkey (via Corinth Canal),
 489
 Derince, Turkey (south of Greece),
 648
 Iskenderun, Turkey (via Corinth Ca-
 nal), 748
 Iskenderun, Turkey (south of
 Greece), 846
 Jaffa, Israel (via Corinth Canal), 752
 Jaffa, Israel (south of Greece), 837

*JUNCTION POINT.—See Preface for use of junction points.

Kerch, U.S.S.R. (via Corinth Canal), 890
 Kerch, U.S.S.R. (south of Greece), 1,049
 Kerkira, Greece, 138
 Larnaca, Cyprus (via Corinth Canal), 658
 Larnaca, Cyprus (south of Greece), 750
 Mersin, Turkey (via Corinth Canal), 690
 Mersin, Turkey (south of Greece), 789
 Napoli, Italy, 485
 Nice, France, 825
 Pula, Yugoslavia, 555

PATRAS, GREECE. See Patrai.

PAULILLAC, FRANCE
 (45°12'00" N., 0°43'45" W.)

Subtract 24½ miles from Bordeaux distances.

PEARL HARBOR, HAWAII, U.S.A.
 (21°20'00" N., 157°58'20" W.) to:

Junction Points*
 Panama, Panama, 4,692

Ports
 Amapala, Honduras, 4,045
 Christmas Island, North Pacific, 1,157
 Eniwetok, Marshall Islands, 2,347
 Jaluit, Marshall Islands, 2,101
 Los Angeles, California, U.S.A., 2,233
 Palmyra Island, Pacific, 960
 San Diego, California, U.S.A., 2,285

PECHENGA, U.S.S.R.
 (69°35'00" N., 31°17'00" E.) to:

Junction Points*
 Skagens Odde, Denmark, 1,325

Ports
 Kirkenes, Norway, 53
 Longyearbyen, Svalbard, 638
 Narvik, Norway, 500
 Reykjavik, Iceland, 1,460

PEDERNALES, VENEZUELA
 (9°58'45" N., 62°15'00" W.) to:

Junction Points*
 Panama, Panama, 1,224
 Yucatan Channel, 1,567

Ports
 Belem, Brazil, 1,191
 Charlotte Amalie, Virgin Islands, 562
 La Guaira, Venezuela, 359

PEDREGAL, PANAMA
 (8°22'00" N., 82°26'12" W.) to:

Junction Points*
 Panama, Panama, 308

Ports
 Acapulco, Mexico, 1,184
 Callao, Peru, 1,313

PEENEMUNDE, GERMANY
 (54°08'00" N., 13°46'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 185
 Skagens Odde, Denmark, 272

Ports
 Gdynia, Poland, 220
 Kobenhavn, Denmark, 128
 Rauma, Finland, 555
 Stockholm, Sweden, 422

PEI-HAI, CHINA
 (21°29'00" N., 109°02'00" E.) to:

Junction Points*
 Singapore, 1,332

Ports
 Cebu, Philippines, 1,220
 Hong Kong, B.C.C., 391
 Sai Gon, Vietnam, 837

PEI-LI, CHINA. See Chang-kan.

PELEW ISLANDS. See Malakal, Palau Islands.

PENANG, MALAYSIA
 (5°25'00" N., 100°21'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,291
 Port Said, U.A.R., 4,733
 Singapore, 367

Ports
 Aden, Aden Protectorate, 3,344
 Akyab, Burma, 1,215
 Al Bahrayn, Bahrain, 3,361
 Al Basrah, Iraq, 3,598
 Al Kuwayt, Kuwait, 3,545

Antsirana, Malagasy Republic, 3,266
 Ao Phuket, Thailand, 187
 Bassein, Burma, 786
 Beira, Mozambique (north of Madagascar), 4,232
 Berbera, Somali Republic (south of Socotra), 3,358
 Bombay, India, 2,154
 Bushehr, Iran, 3,417
 Calcutta, India, 1,294
 Calicut, India, 1,654
 Chalna, Pakistan, 1,228
 Chittagong, Pakistan, 1,167
 Cocanada, India, 1,273
 Colombo, Ceylon, 1,285
 Dar es Salaam, Tanganyika, 3,754
 Diego Garcia, Chagos Archipelago, 1,905
 Durban, Republic of South Africa, 4,584
 East London, Republic of South Africa, 4,794
 Fort Dauphin, Malagasy Republic, 3,687
 Karachi, Pakistan, 2,595
 Lourenco Marques, Mozambique (south of Madagascar), 4,481
 Madras, India, 1,283
 Majunga, Malagasy Republic, 3,557
 Malacca, Malaysia, 252
 Masqat, Mascot and Oman, 2,844
 Melbourne, Australia, 4,181
 Mocambique, Mozambique, 3,792
 Mombasa, Kenya, 3,699
 Mosselbaai, Republic of South Africa, 5,096
 Moulmein, Burma, 743
 Padang, Indonesia, 931
 Port Elizabeth, Republic of South Africa, 4,921
 Port Louis, Mauritius, 3,042
 Port Swettenham, Malaysia, 172
 Rangoon, Burma, 757
 Sabang, Indonesia, 313
 Saint Denis, Reunion Island, 3,157
 Tamatave, Malagasy Republic, 3,387
 Tanga, Tanganyika (north of Pemba Island), 3,749
 Victoria, Seychelles, 2,779
 Zanzibar, Zanzibar, 3,772

PENARTH, WALES
 (51°26'45" N., 3°10'00" W.)

Subtract 1 mile from Cardiff distances.

PENG-HU CHIANG, TAIWAN
 (23°36'00" N., 119°32'00" E.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*
Singapore, 1,660

Ports
Hong Kong, B.C.C., 314
Manila, Philippines, 606
Sai Gon, Vietnam, 1,174
Shang-hai, China, 605

PENSACOLA, FLORIDA, U.S.A.
(30°24'00" N., 87°13'00" W.) to:

Junction Points*
Straits of Florida, 431
Yucatan Channel, 531

Ports
Alvaro Obregon, Mexico, 776
Belize, British Honduras, 826
Campeche, Mexico, 670
Carmen, Mexico, 745
Cienfuegos, Cuba, 825
Colon, Panama, 1,344
Habana, Cuba, 515
Limon, Costa Rica, 1,265
Puerto Mexico, Mexico, 836
Tampico, Mexico, 759
Tuxpan, Mexico, 785
Veracruz, Mexico, 831

PENTLAND FIRTH, SCOTLAND*
(58°42'00" N., 3°20'00" W.) to:

Junction Points*
Bishop Rock, England, 636
Cape of Good Hope, Republic of South Africa, 6,389
Fastnet, Ireland (west of Ireland), 578
Fastnet, Ireland (east of Ireland), 625
Inishtrahull, Ireland, 272
Kiel Canal (east end), Germany, 565
Montreal, Canada (via Strait of Belle Isle), 2,614
Montreal, Canada (tracks C and D, via Cabot Strait), 3,137
Montreal, Canada (track E, via Cabot Strait), 2,934
Montreal, Canada (track F, via Cabot Strait), 2,817
Punta Arenas, Chile, 7,563
Skagens Odde, Denmark, 450
Strait of Gibraltar, 1,598
Straits of Florida (track A, west-bound), 4,100
Straits of Florida (track B, west-bound), 4,075
Straits of Florida (track C, west-bound), 4,012
Yucatan Channel (track A), 4,414

Yucatan Channel (track B), 4,394
Yucatan Channel (track C), 4,324

Ports
Akureyri, Iceland, 702
Amsterdam, Netherlands, 481
Angmagssalik, Greenland, 1,039
Antwerpen, Belgium, 553
Ardrossan, Scotland, 282
Arendal, Norway, 452
Argentia, Canada, 2,012
Arkhangelsk, U.S.S.R., 1,663
Avonmouth, England, 624
Baltimore, Maryland, U.S.A. (track A), 3,520
Baltimore, Maryland, U.S.A. (track B), 3,473
Baltimore, Maryland, U.S.A. (track C), 3,365
Barrow in Furness, England, 427
Belem, Brazil, 4,219
Belfast, Ireland, 341
Bergen, Norway, 296
Berlevag, Norway, 1,150
Blyth, England, 290
Boston, Massachusetts, U.S.A. (track A), 3,090
Boston, Massachusetts, U.S.A. (track B), 3,029
Boston, Massachusetts, U.S.A. (track C), 2,900
Bremerhaven, Germany, 507
Buenos Aires, Argentina, 6,491
Cairn Ryan, Scotland, 340
Camp Lloyd, Greenland, 1,828
Cardiff, Wales, 609
Castries, St. Lucia, 3,704
Charleston, South Carolina, U.S.A. (track A), 3,642
Charleston, South Carolina, U.S.A. (track B), 3,602
Charleston, South Carolina, U.S.A. (track C), 3,506
Charlotte Amalie, Virgin Islands, 3,616
Christianshaab, Greenland, 1,963
Churchill, Canada (via 75 miles off Kap Farvel), 2,820
Cienfuegos, Cuba (track A), 4,277
Cienfuegos, Cuba (track B), 4,263
Cienfuegos, Cuba (track C), 4,229
Cobh, Ireland, 578
Colon, Panama (via Mona Passage), 4,594
Colon, Panama (track C and Windward Passage), 4,534
Dakar, Senegal, 2,794
Den Helder, Netherlands, 447
Douglas, Isle of Man, 397
Dublin, Ireland, 427
Dundee, Scotland, 179
Dunkerque, France, 525
Egedesminde, Greenland, 1,925

Egersund Norway, 298
Emden, Germany, 484
Esbjerg, Denmark, 443
Faeringehavn, Greenland, 1,597
Farsund, Norway, 332
Fishguard, Wales, 497
Flekkefjord, Norway, 325
Fleetwood, England, 437
Frederiksdal, Greenland, 1,268
Fredrikstad, Norway, 531
Freetown, Sierra Leone, 3,272
Funchal, Madeira Island, 1,714
Georgetown, British Guiana, 4,001
Glasgow, Scotland (via The Minch), 384
Godthaab, Greenland, 1,630
Grimstad, Norway, 399
Gronne Dal, Greenland, 1,433
Guantanamo, Cuba (track A), 3,912
Guantanamo, Cuba (track B), 3,897
Guantanamo, Cuba (track C), 3,864
Habana, Cuba (track A), 4,106
Habana, Cuba (track B), 4,081
Habana, Cuba (track C), 4,018
Hafnarfjordhur, Iceland, 680
Hakonsvern, Norway, 287
Halifax, Canada (track A), 2,777
Halifax, Canada (track B), 2,712
Halifax, Canada (tracks C and D), 2,580
Halifax, Canada (track E), 2,422
Halifax, Canada (track F), 2,368
Hamburg, Germany, 555
Hamilton, Bermuda (track A), 2,990
Hamilton, Bermuda (track B), 2,969
Hamilton, Bermuda (track C), 2,921
Hirtshals, Norway, 429
Holsteinsborg, Greenland, 1,802
Holyhead, Wales, 422
Horta, Azores, 1,575
Hvalfjordhur, Iceland, 660
Iokanga, U.S.S.R., 1,424
Ivigut, Greenland (direct), 1,440
Ivigut, Greenland (via 75 miles off Kap Farvel), 1,510
Jacksonville, Florida, U.S.A. (track A), 3,809
Jacksonville, Florida, U.S.A. (track B), 3,766
Jacksonville, Florida, U.S.A. (track C), 3,677
Jakobshavn, Greenland, 1,972
Keflavik, Iceland, 671
Key West, Florida, U.S.A. (track A), 4,040
Key West, Florida, U.S.A. (track B), 4,015
Key West, Florida, U.S.A. (track C), 3,952
Kingston, Jamaica (track A), 4,075
Kingston, Jamaica (track B), 4,061

*JUNCTION POINT.—See Preface for use of junction points.

Kingston, Jamaica (track C), 4,027
 Kragero, Norway, 441
 Kristiansand, Norway, 371
 Larvik, Norway, 461
 Lillesand, Norway, 390
 Limerick, Ireland, 538
 Lisboa, Portugal, 1,341
 Liverpool, England (north of Isle of Man), 451
 Liverpool, England (south of Isle of Man), 460
 Loch Ewe, Scotland, 119
 London, England, 536
 Londonderry, Ireland, 310
 Mandal, Norway, 351
 Methil, Scotland, 246
 Miami, Florida, U.S.A. (track A), 3,909
 Miami, Florida, U.S.A. (track B), 3,884
 Miami, Florida, U.S.A. (track C), 3,821
 Middlesbrough, England, 326
 Molde, Norway, 412
 Mosjoen, Norway, 651
 Namsos, Norway, 615
 Nanortalik, Greenland, 1,291
 Narsarssuak, Greenland, 1,384
 New London, Connecticut, U.S.A. (track A), 3,159
 New London, Connecticut, U.S.A. (track B), 3,109
 New London, Connecticut, U.S.A. (track C), 2,990
 New York, New York, U.S.A. (track A), 3,240
 New York, New York, U.S.A. (track B), 3,190
 New York, New York, U.S.A. (track C), 3,071
 Newcastle, England, 265
 Nieuwpoort, Belgium, 531
 Norfolk, Virginia, U.S.A. (track A), 3,399
 Norfolk, Virginia, U.S.A. (track B), 3,352
 Norfolk, Virginia, U.S.A. (track C), 3,244
 Oostende, Belgium, 509
 Oslo, Norway, 524
 Philadelphia, Pennsylvania, U.S.A. (track A), 3,393
 Philadelphia, Pennsylvania, U.S.A. (track B), 3,343
 Philadelphia, Pennsylvania, U.S.A. (track C), 3,224
 Port au Prince, Haiti (track A), 3,946
 Port au Prince, Haiti (track B), 3,932
 Port au Prince, Haiti (track C), 3,898
 Port of Spain, Trinidad, 3,913
 Providence, Rhode Island, U.S.A. (track A), 3,148

Providence, Rhode Island, U.S.A. (track B), 3,098
 Providence, Rhode Island, U.S.A. (track C), 2,979
 Qutdligssat, Greenland, 2,106
 Recife, Brazil, 4,319
 Reykjavik, Iceland, 687
 Rio de Janeiro, Brazil, 5,391
 Risor, Norway, 429
 Ritenbenk, Greenland, 2,135
 Rosyth, Scotland, 263
 Rotterdam, Netherlands, 495
 San Juan, Puerto Rico (track A), 3,645
 San Juan, Puerto Rico (track B), 3,643
 Sandefjord, Norway, 518
 Santa Cruz de Tenerife, Canary Islands, 1,952
 Santo Domingo, Dominican Republic (track A), 3,828
 Santo Domingo, Dominican Republic (track B), 3,823
 Savannah, Georgia, U.S.A. (track A), 3,732
 Savannah, Georgia, U.S.A. (track B), 3,692
 Savannah, Georgia, U.S.A. (track C), 3,594
 Scoresbysund, Greenland, 871
 Seaham Harbor, England, 259
 Seydhisfjorðhur, Iceland, 500
 Shoreham By Sea, England, 633
 Skien, Norway, 466
 Sogndal, Norway, 123
 Sondre Honningsvåg, Norway, 1,099
 Stornoway, Scotland, 54
 Sukkertoppen, Greenland, 1,700
 Sunderland, England, 304
 Swansea, Wales, 578
 Thule, Greenland, 2,456
 Tonsberg, Norway, 532
 Torshavn, Faeroe Islands, 224
 Tvedestrand, Norway, 421
 Upernivik, Greenland, 2,164
 Vardo, Norway, 1,253
 Washington, D.C., U.S.A. (track A), 3,534
 Washington, D.C., U.S.A. (track B), 3,487
 Washington, D.C., U.S.A. (track C), 3,379
 Wilhelmshaven, Germany, 501
 Wilmington, North Carolina, U.S.A. (track A), 3,573
 Wilmington, North Carolina, U.S.A. (track B), 3,548
 Wilmington, North Carolina, U.S.A. (track C), 3,450
 Zeebrugge, Belgium, 505

PERNAMBUCO, BRAZIL. See Recife.

PERTH, AUSTRALIA
 (31°57'30" S., 115°51'00" E.)

Add 12 miles to Fremantle distances.

PESCARA, ITALY
 (42°28'15" N., 14°13'50" E.) to:

Junction Points*
 Port Said, U.A.R. (south of Greece), 1,141
 Strait of Gibraltar, 1,515

Ports
 Brindisi, Italy, 209
 Split, Yugoslavia, 123
 Venezia, Italy, 201

PETERSBURG, ALASKA, U.S.A.
 (56°48'56" N., 132°57'50" W.) to:

Ports
 Dutch Harbor, Alaska, U.S.A., 1,215
 Seattle, Washington, U.S.A., 771
 Valdez, Alaska, U.S.A., 539
 Victoria, Canada, 719

PETROPAVLOVSK, U.S.S.R.
 (53°00'00" N., 158°38'00" E.) to:

Junction Points*
 Panama, Panama (via Unimak Pass), 6,492
 Singapore (via Pervyy Kurliskiy Proliv and La Perouse Strait), 4,194
 Singapore (via Tsugaru Kaikyo and Formosa Strait), 4,227
 Singapore (east of Japan and via Balintang Channel), 4,241
 Singapore (east of Japan, and via Osumi Kaikyo and Formosa Strait), 4,293
 Sunda Strait, Indonesia (via Soya Strait), 4,574
 Wetar Passage, Australia (via Dampier Strait and Selat Manipa), 4,106

Ports
 Aleksandrovsk, U.S.S.R. (via Proliv Chetverty Kurilskiy and La Perouse Strait), 1,158
 Apia, Samoa, 4,292
 Apra, Guam, 2,475
 Auckland, New Zealand, 5,466
 Avarua, Cook Islands, 4,951

*JUNCTION POINT.—See Preface for use of junction points.

- Bukhta Broutona, Kuril Islands, 451
 Cebu, Philippines, 3,101
 Ching-tao, China (via Proliv Chet-
 vertyy Kurilskiy and La Perouse
 Strait), 2,215
 Ching-huang-tao, China (via Proliv
 Chetvertyy Kurilskiy, La Perouse
 Strait, and Maenggol Sudo), 2,368
 Chinnampo, Korea, 2,214
 Djakarta, Indonesia (via La Perouse
 Strait), 4,555
 Djakarta, Indonesia (east of Japan,
 and via Balintang Channel), 4,530
 Dutch Harbor, Alaska, U.S.A., 1,249
 Hai-kou, Hai-nan Tao, China, 3,102
 Hakodate, Japan, 1,075
 Hong Kong, B.C.C. (via Osumi
 Kaikyo), 2,938
 Hong Kong, B.C.C. (via Tsugaru
 Kaikyo), 2,870
 Hong Kong, B.C.C. (via Proliv Chet-
 vertyy Kurilskiy and La Perouse
 Strait), 2,863
 Honolulu, Hawaii, U.S.A., 2,762
 Hsia-men, China (via La Perouse
 Strait), 2,596
 Hsia-men, China (via Osumi Kaikyo),
 2,684
 Hsia-men, China (via Tsugaru Kai-
 kyo), 2,617
 Iloilo, Philippines, 3,123
 Inchon, Korea (via Tsugaru Kaikyo),
 2,138
 Inchon, Korea (via La Perouse Strait
 and Maenggol Sudo), 2,120
 Inchon, Korea (via Proliv Chetvertyy
 Kurilskiy and La Perouse Strait),
 2,114
 Jaluit, Marshall Islands, 2,883
 Kasatka, Japan, 690
 Kiska, Alaska, U.S.A., 724
 Kobe, Japan, 1,705
 Krung Thep, Thailand, outer bar
 (via La Perouse Strait), 4,252
 Kuang-chou, China (via Proliv Chet-
 vertyy Kurilskiy and La Perouse
 Strait), 2,941
 Kuang-chou, China (via Tsugaru
 Kaikyo), 2,953
 Kuang-chou, China (via Osumi
 Kaikyo), 3,021
 Levuka, Fiji Islands, 4,518
 Los Angeles, California, U.S.A., 3,615
 Lo-hsing-ta Mao-ti, China (via Proliv
 Chetvertyy Kurilskiy and La
 Perouse Strait), 2,481
 Lu-shun, China (via Proliv Chet-
 vertyy Kurilskiy, La Perouse Strait,
 and Maenggol Sudo), 2,267
 Lu-shun, China (via Osumi Kaikyo),
 2,588
- Manila, Philippines (east of Japan
 and via Balintang Channel), 3,112
 Manila, Philippines (via Proliv Chet-
 vertyy Kurilskiy and La Perouse
 Strait), 3,117
 Manila, Philippines (via Tsugaru
 Kaikyo), 3,124
 Manila, Philippines (via San Bernar-
 dino Strait), 3,256
 Matsugahama, Japan, 765
 Midway Island, Pacific, 1,831
 Mokpo, Korea (via Myongyangdo),
 1,923
 Mokpo, Korea (via La Perouse Strait
 and Changjuk Sudo), 1,943
 Nagayevo, U.S.S.R., 864
 Nagasaki, Japan (via La Perouse
 Strait), 1,845
 Nagasaki, Japan (via Tsugaru
 Kaikyo), 1,858
 Nagasaki, Japan (via Osumi Kaikyo),
 2,039
 Nome, Alaska, U.S.A., 1,317
 Noumea, New Caledonia, 4,587
 Omura, Bonin Islands, 1,736
 Osaka, Japan (via Kii Suido), 1,709
 Pago Pago, American Samoa, 4,350
 Papeete, Society Islands, 5,009
 Ponape, Caroline Islands, 2,762
 Prince Rupert, Canada (via Unimak
 Pass), 2,504
 Pusan, Korea (via Proliv Chetvertyy
 Kurilskiy and La Perouse Strait),
 1,731
 Rabaul, New Britain, 3,555
 Sai Gon, Vietnam (via Proliv Chet-
 vertyy Kurilskiy, La Perouse Strait
 and Korea Strait), 3,718
 San Diego, California, U.S.A., 3,707
 San Francisco, California, U.S.A.
 (via Unimak Pass), 3,292
 Seattle, Washington, U.S.A. (via
 Unimak Pass), 2,939
 Seward, Alaska, U.S.A. (via Unimak
 Pass), 2,065
 Shang-hai, China (via Tsugaru
 Kaikyo), 2,224
 Shang-hai, China (via La Perouse
 Strait), 2,200
 Shan-tou, China (via Proliv Chet-
 vertyy Kurilskiy and La Perouse
 Strait), 2,713
 Shan-tou, China (via Tsugaru
 Kaikyo), 2,720
 Shan-tou, China (via Osumi Kaikyo),
 2,788
 Shimonoseki, Japan (via Tsugaru
 Kaikyo), 1,739
 Sitka, Alaska, U.S.A., 2,314
 Slavnoye, Kuril Islands, 629
 Suva, Fiji Islands, 4,460
- Ta-ku, China (via Tsugaru Kaikyo),
 2,444
 Ta-ku, China (via La Perouse Strait),
 2,419
 Ta-lien, China (via La Perouse
 Strait), 2,260
 Ta-lien, China (via Tsugaru Kaikyo),
 2,285
 Tan-shui, Taiwan (via Proliv Chet-
 vertyy Kurilskiy and La Perouse
 Strait), 2,437
 Tan-shui, Taiwan (via Tsugaru
 Kaikyo), 2,444
 Tan-shui, Taiwan (via Osumi
 Kaikyo), 2,496
 Tomari, Japan, 822
 Vladivostok, U.S.S.R. (via Proliv
 Chetvertyy Kurilskiy and La
 Perouse Strait), 1,348
 Wei-hai-wei, China (via Maenggol
 Sudo), 2,192
 Wei-hai-wei, China (via Proliv Chet-
 vertyy Kurilskiy and La Perouse
 Strait), 2,215
 Wonsan, Korea, 1,609
 Yen-tai, China (via Maenggol Sudo),
 2,226
 Yen-tai, China (via Proliv Chetvertyy
 Kurilskiy and La Perouse Strait),
 2,249
 Yen-tai, China (via Tsugaru Kaikyo),
 2,263
 Yin-hsien, China (via Shih-peng
 Chiang), 2,237
 Yokohama, Japan, 1,422
- PETSAMO, U.S.S.R. See Pechenga.
- PEVEK, U.S.S.R.
 (69°43'40" N., 170°28'00" E.) to:
- Ports
 Ambarchik, U.S.S.R., 201
 Nome, Alaska, U.S.A., 700
 Provideniya, U.S.S.R., 719
 Tiksi, U.S.S.R., 854
- PHILADELPHIA, PENNSYLVANIA,
 U.S.A.
 (39°57'00" N., 75°08'00" W.) to:
- Junction Points*
 Bishop Rock, England (track A),
 3,197
 Bishop Rock, England (track B),
 3,159
 Bishop Rock, England (track C),
 3,092
 Cape of Good Hope, Republic of
 South Africa, 6,874

*JUNCTION POINT.—See Preface for use of junction points.

Fastnet, Ireland (track A), 3,106
 Fastnet, Ireland (track B), 3,067
 Fastnet, Ireland (track C), 2,985
 Inishtrahull, Ireland (track A), 3,232
 Inishtrahull, Ireland (track B), 3,186
 Inishtrahull, Ireland (track C), 3,083
 Montreal, Canada (via Strait of Canso), 1,609
 Montreal, Canada (via Cabot Strait), 1,671
 Panama, Panama, 1,989
 Pentland Firth, Scotland (track A), 3,446
 Pentland Firth, Scotland (track B), 3,390
 Pentland Firth, Scotland (track C), 3,263
 Punta Arenas, Chile, 6,994
 Strait of Gibraltar (track A), 3,344
 Strait of Gibraltar (track B), 3,331
 Strait of Gibraltar (track C), 3,320
 Straits of Florida, 1,150
 Yucatan Channel (outside route), 1,336

Ports

Angmagssalik, Greenland (direct), 2,428
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,442
 Antilla, Cuba, 1,197
 Argentia, Canada, 1,159
 Arkhangelsk, U.S.S.R., 4,369
 Bahia Blanca, Argentina, 6,201
 Banes, Cuba (via Crooked Island Passage), 1,188
 Baracoa, Cuba, 1,198
 Belem, Brazil, 2,950
 Bluefields, Nicaragua (via Crooked Island Passage and Windward Passage), 1,973
 Bocas del Toro, Panama, 2,020
 Bordeaux, France (track A), 3,492
 Bordeaux, France (track B), 3,461
 Bordeaux, France (track C), 3,406
 Brest, France (track A), 3,279
 Brest, France (track B), 3,243
 Brest, France (track C), 3,183
 Bridgetown, Barbados, 1,839
 Buenos Aires, Argentina, 5,918
 Cadiz, Spain (track A), 3,310
 Cadiz, Spain (track B), 3,297
 Cadiz, Spain (track C), 3,286
 Cap Haitien, Haiti, 1,245
 Cape Town, Republic of South Africa, 6,861
 Cardenas, Cuba, 1,124
 Cartagena, Colombia (via Crooked Island Passage and Windward Passage), 1,825
 Castries, St. Lucia, 1,753

Cayenne, French Guiana, 2,468
 Charlotte Amalie, Virgin Islands, 1,434
 Charlottetown, Canada, 982
 Cienfuegos, Cuba (via Crooked Island Passage and Windward Passage), 1,654
 Clarence Bay, Ascension Island, 4,469
 Colon, Panama (via Crooked Island Passage and Windward Passage), 1,946
 Dakar, Senegal, 3,441
 Elizabeth Harbor, Bahamas, 1,018
 Fort de France, Martinique (via Anegada Channel), 1,724
 Freetown, Sierra Leone, 3,862
 Funchal, Madeira Island (track A), 2,901
 Georgetown, British Guiana, 2,223
 Guantanamo, Cuba, 1,284
 Habana, Cuba, 1,156
 Halifax, Canada, 746
 Hamilton, Bermuda, 746
 Ivigtut, Greenland, 2,086
 Jacmel, Haiti, 1,461
 Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,446
 Lagos, Nigeria, 4,985
 La Guaira, Venezuela, 1,838
 Las Piedras, Venezuela, 1,786
 Les Cayes, Haiti, 1,419
 Limon, Costa Rica (via Crooked Island Passage and Windward Passage), 2,019
 Lisboa, Portugal (track A), 3,145
 Lisboa, Portugal (track B), 3,129
 Lisboa, Portugal (track C), 3,112
 Liverpool, Canada, 686
 Luderitz Bay, Southwest Africa, 6,477
 Maracaibo, Venezuela (via Windward Passage), 1,849
 Mantanzas, Cuba, 1,147
 Montecristi, Dominican Republic, 1,250
 Montevideo, Uruguay, 5,804
 Murmansk, U.S.S.R., 4,042
 Narvik, Norway (track B), 4,031
 Narvik, Norway (track C), 3,880
 Nassau, Bahamas, 930
 Nuevitas, Cuba, 1,243
 Paramaribo, Surinam, 2,327
 Parrasboro, Canada, 743
 Pointe a Pitre, Guadeloupe, 1,658
 Ponce, Puerto Rico, 1,454
 Ponta Delgada, Azores (track A), 2,397
 Ponta Delgada, Azores (track B), 2,392
 Porlamar, Venezuela (via Virgin Passage), 1,878

Port Antonio, Jamaica (via Crooked Island Passage and Windward Passage), 1,395
 Port au Prince, Haiti (via Crooked Island Passage and Windward Passage), 1,343
 Port of Spain, Trinidad, 1,938
 Port Plata, Dominican Republic, 1,250
 Porto Grande, Cape Verde Islands, 3,011
 Puerto Barrios, Guatemala (via Straits of Florida, southbound), 1,774
 Puerto Cabello, Venezuela (via Mona Passage), 1,845
 Puerto Colombia, Colombia, 1,774
 Puerto Cortes, Honduras, 1,739
 Puerto la Cruz, Venezuela, 1,900
 Puerto Sucre, Venezuela, 1,907
 Recife, Brazil, 3,745
 Reykjavik, Iceland, 2,648
 Rio de Janeiro, Brazil, 4,817
 St. Georges, Grenada, 1,848
 St. Helena Island, 5,169
 St. John, Canada (via Vineyard Sound), 673
 St. John, Canada (via Nantucket Light Vessel), 698
 St. John's, Canada, 1,254
 Salvador, Brazil, 4,136
 San Juan, Puerto Rico, 1,395
 San Juan del Norte, Nicaragua (via Crooked Island Passage and Windward Passage), 2,004
 San Juan del Norte, Nicaragua (via Straits of Florida, southbound), 2,017
 Santa Cruz Tenerife, Canary Islands, 3,062
 Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,755
 Santander, Spain (track C), 3,272
 Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 1,334
 Santo Domingo, Dominican Republic, 1,480
 Santos, Brazil, 5,004
 Sint Nicolaas, Aruba, 1,732
 Sydney, Canada, 958
 Vigo, Spain (track A), 3,121
 Vigo, Spain (track B), 3,098
 Vigo, Spain (tracks C and D), 3,066
 Vitoria, Brazil, 4,554
 Walvisbaai, Southwest Africa, 6,318
 Willemstad, Curacao, 1,762
 Yarmouth, Canada, 616

PHILIPPEVILLE, ALGERIA. See Skikda.

PHNOM PENH, CAMBODIA

(11°36'00'' N., 104°54'00'' E.)

Via Vung Tau pilot station (10°20'30'' N., 107°04'00'' E.). Add 157½ miles to Sai Gon distances.

PHUKET, THAILAND. See Ao Phuket.

PIETERSAARI, FINLAND. See Jakobstad.

PILLAU, U.S.S.R. See Baltiysk.

PIMENTEL, PERU

(6°50'00'' S., 79°58'00'' W.) to:

Ports

Callao, Peru, 363
Salaverry, Peru, 104
Talara, Peru, 182

PINA, PANAMA

(9°20'00'' N., 80°05'00'' W.) to:

Junction Points*

Yucatan Channel, 816

Ports

Cienfuegos, Cuba, 777
Kingston, Jamaica, 558
Puerto Siboney, Cuba, 697
San Juan, Puerto Rico, 1,219

PIOMBINO, ITALY. See Porto Vecchio di Piombino.

PIRAEUS, GREECE. See Piraeus.

PIRAIEVS, GREECE

(37°56'26'' N., 23°38'08'' E.) to:

Junction Points*

Port Said, U.A.R., 599
Strait of Gibraltar (via Corinth Canal), 1,451
Strait of Gibraltar (via south of Greece), 1,508

Ports

Alexandria, U.A.R., 515
Alger, Algeria (via Corinth Canal), 1,022
Alger, Algeria (south of Greece), 1,079
Alicante, Spain (via Corinth Canal), 1,186

Alicante, Spain (south of Greece), 1,246

Ancona, Italy (Corinth Canal), 608

Ancona, Italy (south of Greece), 745

Annaba, Algeria (via Corinth Canal), 797

Annaba, Algeria (south of Greece), 854

Antalya, Turkey, 383

Banghazi, Libya, 404

Barcelona, Spain (via Corinth Canal), 1,091

Barcelona, Spain (south of Greece), 1,172

Bari, Italy (via Corinth Canal), 402

Bari, Italy (south of Greece), 538

Bayrut, Lebanon, 647

Bizerte, Tunisia (via Corinth Canal), 692

Bizerte, Tunisia (south of Greece), 749

Brindisi, Italy (via Corinth Canal), 343

Brindisi, Italy (south of Greece), 480

Cagliari, Sardinia (via Corinth Canal), 738

Cagliari, Sardinia (south of Greece), 820

Cannes, France (via Corinth Canal), 942

Cannes, France (south of Greece), 1,023

Cartagena, Spain (via Corinth Canal), 1,214

Cartagena, Spain (south of Greece), 1,271

Ceuta, Morocco (via Corinth Canal), 1,431

Ceuta, Morocco (south of Greece), 1,488

Darnah, Libya, 316

Durres, Albania, 339

Ermoupolis, Greece, 84

Famagusta, Cyprus, 604

Fethiye, Turkey, 305

Genova, Italy (via Corinth Canal), 896

Genova, Italy (south of Greece), 978

Gibraltar (via Corinth Canal), 1,433

Gibraltar (south of Greece), 1,490

Haifa, Israel, 650

Iraklion, Crete, 175

Iskenderun, Turkey, 656

Istanbul, Turkey, 364

Izmir, Turkey, 210

Kavala, Greece, 249

Khania, Crete, 148

La Spezia, Italy (via Corinth Canal), 860

La Spezia, Italy (south of Greece), 942

Larnaca, Cyprus, 566

Limin Khion, Greece, 162

Livorno, Italy (via Corinth Canal), 825

Livorno, Italy (south of Greece), 906

Malaga, Spain (via Corinth Canal), 1,381

Malaga, Spain (south of Greece), 1,438

Marseille, France (via Corinth Canal), 988

Marseille, France (south of Greece), 1,069

Mersin, Turkey, 598

Messina, Sicily (via Corinth Canal), 414

Messina, Sicily (south of Greece), 496

Mitilini, Greece, 191

Napoli, Italy (via Corinth Canal), 586

Napoli, Italy (south of Greece), 667

Navplion, Greece, 142

Odessa, U.S.S.R., 712

Oran, Algeria (via Corinth Canal), 1,219

Oran, Algeria (south of Greece), 1,276

Palermo, Sicily (via Corinth Canal), 531

Palermo, Sicily (south of Greece), 612

Palma, Balearic Islands (via Corinth Canal), 1,049

Palma, Balearic Islands (south of Greece), 1,131

Preveza, Greece, 197

Rethimnon, Crete, 151

Rijeka, Yugoslavia (via Corinth Canal), 675

Rijeka, Yugoslavia (south of Greece), 814

Rodhos, Rodhos, 261

Sarande, Albania, 253

Savona, Italy (via Corinth Canal), 906

Savona, Italy (south of Greece), 988

Sibenik, Yugoslavia (via Corinth Canal), 548

Sibenik, Yugoslavia (south of Greece), 687

Siracusa, Sicily (via Corinth Canal), 418

Siracusa, Sicily (south of Greece), 484

Soudha, Crete, 159

Split, Yugoslavia (via Corinth Canal), 533

Split, Yugoslavia (south of Greece), 672

Tarabulus, Libya, 640

Taranto, Italy (via Corinth Canal), 363

Taranto, Italy (south of Greece), 493

Thessaloniki, Greece, 259

Toulon, France (via Corinth Canal), 956

*JUNCTION POINT.—See Preface for use of junction points.

Toulon, France (south of Greece), 1,038
 Trieste, Free Territory (via Corinth Canal), 709
 Trieste, Free Territory (south of Greece), 848
 Tubruq, Libya, 359
 Tunis, Tunisia (via Corinth Canal), 680
 Tunis, Tunisia (south of Greece), 737
 Valencia, Spain (via Corinth Canal), 1,174
 Valencia, Spain (south of Greece), 1,244
 Valletta, Malta, 524
 Venezia, Italy (via Corinth Canal), 719
 Venezia, Italy (south of Greece), 856
 Vlores, Albania, 295
 Volos, Greece, 200

PISAGUA, CHILE

(19°34'30'' S., 70°14'00'' W.) to:

Junction Points*

Panama, Panama, 1,962

Ports

San Francisco, California, U.S.A., 4,593

PISCO, PERU

(13°43'30'' S., 76°14'30'' W.) to:

Junction Points*

Panama, Panama, 1,458
 Punta Arenas, Chile, 2,578

Ports

Acapulco, Mexico, 2,309
 Antofagasta, Chile, 713
 Arica, Chile, 492
 Caldera, Chile, 880
 Callao, Peru, 128
 Coquimbo, Chile, 1,036
 Corinto, Nicaragua, 1,718
 Corral, Chile, 1,596
 Esmeraldas, Ecuador, 1,021
 Guayaquil, Ecuador, 788
 Guaymas, Mexico, 3,227
 Iquique, Chile, 560
 Lota, Chile, 1,432
 Mollendo, Peru, 367
 Monterey, California, U.S.A., 4,017
 Puntarenas, Costa Rica, 1,533
 Salina Cruz, Mexico, 2,117
 San Blas, Mexico, 2,771
 San Diego, California, U.S.A., 3,695
 San Francisco, California, U.S.A., 4,097
 San Jose, Guatemala, 1,875

Santa Barbara, California, U.S.A., 3,832
 Talcahuano, Chile, 1,411
 Valparaiso, Chile, 1,207

PITEA, SWEDEN

(65°17'40'' N., 21°28'20'' E.) to:

Junction Points*

Kiel Canal (east end), Germany, 864
 Skagens Odde, Denmark, 925

Ports

Gdynia, Poland, 687
 Leningrad, U.S.S.R., 687
 Stockholm, Sweden, 402

PLOCE, YUGOSLAVIA

(43°03'00'' N., 17°25'42'' E.) to:

Junction Points*

Port Said, U.A.R., 1,132
 Strait of Gibraltar, 1,487

Ports

Ancona, Italy, 167
 Durres, Albania, 214
 Rijeka, Yugoslavia, 230

PLYMOUTH, ENGLAND

(50°21'40'' N., 4°09'10'' W.) to:

Junction Points*

Bishop Rock, England, 106
 Kiel Canal (east end), Germany, 639
 Skagens Odde, Denmark, 756
 Ushant, France, 117

Ports

Aberdeen, Scotland, 638
 Amsterdam, Netherlands, 390
 Antwerpen, Belgium, 366
 Bergen, Norway, 819
 Bremerhaven, Germany, 573
 Calais, France, 244
 Dieppe, France, 206
 Dover, England, 229
 Dundee, Scotland, 621
 Dunkerque, France, 264
 Egersund, Norway, 706
 Emden, Germany, 513
 Esbjerg, Denmark, 599
 Fecamp, France, 183
 Funchal, Madeira Island, 1,234
 Granville, France, 149
 Hamburg, Germany, 628
 Hartlepool, England, 502
 Hull, England, 442
 Kristiansand, Norway, 717
 Las Palmas de Gran Canaria, Canary Islands, 1,432

Le Havre, France, 177
 Leith, Scotland, 619
 London, England, 321
 Newcastle, England, 524
 Oostende, Belgium, 288
 Oslo, Norway, 869
 Rotterdam, Netherlands, 367
 Shoreham By Sea, England, 162
 Southampton, England, 134
 Stavanger, Norway, 746
 Wilhelmshaven, Germany, 557
 Zeebrugge, Belgium, 303

PLYMOUTH, MONTSEERAT

(16°42'10'' N., 62°13'30'' W.) to:

Ports

Hamilton, Bermuda, 966
 New York, New York, U.S.A., 1,574
 Pointe a Pitre, Guadeloupe, 84

P'OHANG, KOREA

(36°02'45'' N., 129°23'30'' E.) to:

Ports

Hakodate, Japan, 665
 Inchon, Korea, 511
 Maizuru, Japan, 313
 Shimonoseki, Japan, 164

POINTE A PITRE, GUADELOUPE

(16°14'00'' N., 61°32'30'' W.) to:

Junction Points*

Panama, Panama, 1,211
 Straits of Florida (via Virgin Passage), 1,347
 Straits of Florida (via Mona Passage), 1,348
 Yucatan Channel (south of Hispaniola), 1,410

Ports

Alvaro Obregon, Mexico, 1,957
 Baltimore, Maryland, U.S.A., 1,653
 Barranquilla, Colombia, 857
 Basse-Terre, Guadeloupe, 31
 Belize, British Honduras, 1,578
 Boston, Massachusetts, U.S.A., 1,742
 Campeche, Mexico, 1,806
 Cap Haitien, Haiti (via Virgin Passage), 702
 Carmen, Mexico, 1,885
 Cartagena, Colombia, 941
 Castries, St. Lucia, 141
 Cayenne, French Guiana, 867
 Charleston, South Carolina, U.S.A., 1,443
 Charlotte Amalie, Virgin Islands, 267

*JUNCTION POINT.—See Preface for use of junction points.

Cienfuegos, Cuba, 1,204
 Colon, Panama, 1,168
 Fort de France, Martinique, 108
 Georgetown, British Guiana, 606
 Guantanamo, Cuba, 879
 Gulfport, Mississippi, U.S.A. (via Virgin Passage), 1,822
 Habana, Cuba (via Virgin Passage), 1,308
 Key West, Florida, U.S.A. (via Mona Passage), 1,297
 Key West, Florida, U.S.A. (via Virgin Passage), 1,296
 Kingston, Jamaica, 910
 La Guaira, Venezuela, 467
 Miami, Florida, U.S.A., 1,247
 New York, New York, U.S.A., 1,652
 Norfolk, Virginia, U.S.A., 1,527
 Paramaribo, Surinam, 737
 Philadelphia, Pennsylvania, U.S.A., 1,658
 Plymouth, Montserrat, 84
 Port au Prince, Haiti (south of Hispaniola), 945
 Port of Spain, Trinidad, 358
 Puerto Cabello, Venezuela, 520
 Roseau, Dominica Island, 60
 St. Johns, Antigua (east of Guadeloupe), 107
 St. Johns, Antigua (west of Guadeloupe), 110
 San Juan, Puerto Rico, 333
 San Juan del Norte, Nicaragua, 1,345
 Santo Domingo, Dominican Republic, 520
 Sint Nicolaas, Aruba, 550
 Tuxpan, Mexico, 2,094
 Willemstad, Curacao, 517

POINTE NOIRE, GABON
 (4°47'00" S., 11°50'00" E.) to:

Ports
 Accra, Ghana, 952
 Bathurst, Gambia, 2,175
 Benguela, Angola, 480
 Boma, Republic of the Congo, 140
 Douala, Cameroon, 613
 Freetown, Sierra Leone, 1,788
 Lagos, Nigeria, 851
 Libreville, Gabon, 399
 Lobito, Angola, 473
 Lome, Togo, 910
 Luanda, Angola, 266
 Monrovia, Liberia, 1,525
 Port Gentil, Gabon, 341
 Port Harcourt, Nigeria, 677
 Rio Grande, Brazil, 3,938
 Sao Tome, Gulf of Guinea, 436
 Sekondi, Ghana, 997
 Takoradi, Ghana, 1,001

POLA, YUGOSLAVIA. See Pula.

POLLENSA, BALEARIC ISLANDS
 (39°53'30" N., 3°06'30" E.) to:

Junction Points*
 Port Said, U.A.R., 1,535
 Strait of Gibraltar, 525

Ports
 Barcelona, Spain, 113
 Marseille, France, 234
 Oran, Algeria, 346

POLYARNYY, U.S.S.R.
 (69°12'10" N., 33°29'36" E.)

Subtract 19 miles from Murmansk distances.

PONAPE, CAROLINE ISLANDS
 (6°59'15" N., 159°13'30" E.) to:

Junction Points*
 Panama, Panama, 7,321
 Punta Arenas, Chile, 7,260

Ports
 Apia, Samoa, 2,189
 Apra, Guam, 901
 Auckland, New Zealand, 2,813
 Avarua, Cook Islands, 3,001
 Brisbane, Australia, 2,108
 Callao, Peru, 7,515
 Hakodate, Japan, 2, 298
 Hobart, Tasmania, 3,130
 Hong Kong, B.C.C., 2,710
 Honolulu, Hawaii, U.S.A., 2,685
 Jaluit, Marshall Islands, 698
 Levuka, Fiji Islands, 2,024
 Malakal, Palau Islands, 1,418
 Melbourne, Australia, 3,078
 Midway Island, Pacific, 1,882
 Nagasaki, Japan, 2,256
 Nonouti, Gilbert Islands, 1,082
 Noumea, New Caledonia, 1,892
 Nukualofa, Tonga Islands, 2,341
 Omura, Bonin Islands, 1,519
 Pago Pago, American Samoa, 2,266
 Papeete, Society Islands, 3,430
 Petropavlovsk, U.S.S.R., 2,762
 Rabaul, New Britain, 853
 San Francisco, California, U.S.A., 4,641
 Seattle, Washington, U.S.A., 4,696
 Selwyn Bay, Solomon Islands, 1,069
 Shang-hai, China, 2,545
 Sydney, Australia, 2,514
 Truk, Caroline Islands, 383
 Valparaiso, Chile, 7,631
 Yokohama, Japan, 1,998

PONCE, PUERTO RICO
 (17°58'30" N., 66°37'00" W.) to:

Junction Points*
 Panama, Panama, 976
 Straits of Florida, 1,020

Ports
 Baltimore, Maryland, U.S.A., 1,427
 Boston, Massachusetts, U.S.A., 1,563
 Charleston, South Carolina, U.S.A., 1,168
 Fort de France, Martinique, 381
 Guantanamo, Cuba (north of Hispaniola, and via Mona Passage), 540
 Habana, Cuba (via Old Bahama Channel, and Mona Passage), 981
 Jacksonville, Florida, U.S.A., 1,146
 Key West, Florida, U.S.A., 969
 New York, New York, U.S.A., 1,462
 Philadelphia, Pennsylvania, U.S.A., 1,454
 Rio de Janeiro, Brazil, 3,659
 Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 587
 Santiago de Cuba, Cuba (south of Hispaniola), 599
 Santo Domingo, Dominican Republic, 196
 Savannah, Georgia, U.S.A., 1,180
 Willemstad, Curacao, 399

PONTA DELGADA, AZORES
 (37°44'00" N., 25°40'00" W.) to:

Junction Points*
 Bishop Rock, England, 1,103
 Montreal, Canada (tracks C and D), 2,331
 Montreal, Canada (track E), 2,288
 Montreal, Canada (track F), 2,289
 Strait of Gibraltar, 964
 Straits of Florida, 3,052
 Ushant, France, 1,101

Ports
 Baltimore, Maryland, U.S.A., 2,529
 Bathurst, Gambia, 1,551
 Belem, Brazil, 2,678
 Bordeaux, France, 1,256
 Boston, Massachusetts, U.S.A. (track A), 2,093
 Boston, Massachusetts, U.S.A. (track B), 2,083
 Boston, Massachusetts, U.S.A. (tracks C and D), 2,086
 Buenos Aires, Argentina, 4,975
 Cadiz, Spain, 931
 Cap Haitien, Haiti, 2,646

*JUNCTION POINT.—See Preface for use of junction points.

Cape Town, Republic of South Africa, 5,040
 Casablanca, Morocco, 915
 Charleston, South Carolina, U.S.A., 2,644
 Colon, Panama, 3,379
 Dakar, Senegal, 1,459
 El Ferrol del Caudillo, Spain, 870
 Freetown, Sierra Leone, 1,941
 Funchal, Madeira Island, 550
 Halifax, Canada (direct), 1,755
 Halifax, Canada (tracks C and D), 1,774
 Horta, Azores, 153
 Huelva, Spain, 914
 Las Palmas de Gran Canaria, Canary Islands, 774
 Lisboa, Portugal, 783
 New York, New York, U.S.A. (direct), 2,247
 New York, New York, U.S.A. (track A), 2,253
 New York, New York, U.S.A. (track B), 2,253
 Norfolk, Virginia, U.S.A. (track A), 2,401
 Philadelphia, Pennsylvania, U.S.A. (track A), 2,392
 Philadelphia, Pennsylvania, U.S.A. (track B), 2,391
 Porto, Portugal, 815
 Porto Grande, Cape Verde Islands, 1,253
 Recife, Brazil, 2,803
 Rio de Janeiro, Brazil, 3,875
 St. John's, Canada, 1,326
 San Juan, Puerto Rico, 2,412
 Santa Cruz de Tenerife, Canary Islands, 740
 Santo Domingo, Dominican Republic, 2,620
 Vigo, Spain, 828

PORI, FINLAND

(61°29'30" N., 21°48'00" E.)

Add 13 miles to Reposaari distances.

PORKKALA, FINLAND

(59°59'06" N., 24°28'06" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 647
 Skagens Odde, Denmark, 697

Ports

Gdynia, Poland, 412
 Riga, Latvia, 284
 Stockholm, Sweden, 216

PORLAMAR, MARGARITA, VENEZUELA
 (10°56'00" N., 63°50'00" W.) to:

Junction Points*

Straits of Florida (via Mona Passage), 1,454
 Yucatan Channel, 1,407

Ports

Cartagena, Columbia, 785
 Colon, Panama, 1,012
 Great Harbor, Culebra Island, 470
 Guantanamo, Cuba, 884
 New York, New York, U.S.A. (via Virgin Passage), 1,879
 Philadelphia, Pennsylvania, U.S.A. (via Virgin Passage), 1,878
 Santa Barbara de Samana, Dominican Republic, 610

PORT ADELAIDE, AUSTRALIA.
 See Adelaide.

PORT ANGELES, WASHINGTON, U.S.A.
 (48°08'00" N., 123°27'00" W.) to:

For ocean distances, subtract 60 miles from Seattle distances.

Ports

Nanaimo, Canada, 98
 New Westminster, Canada, 90
 Vancouver, Canada, 93
 Victoria, Canada, 20

PORT ANTONIO, JAMAICA
 (18°11'35" N., 76°27'00" W.) to:

Junction Points*

Panama, Panama, 625
 Straits of Florida, 751
 Yucatan Channel, 536

Ports

Antilla, Cuba, 288
 Baltimore, Maryland, U.S.A. (via Windward Passage and Crooked Island Passage), 1,350
 Boston, Massachusetts, U.S.A. (via Windward Passage and Crooked Island Passage), 1,606
 Charleston, South Carolina, U.S.A. (via Windward Passage and Crooked Island Passage), 1,013
 Colon, Panama, 582
 Gibara, Cuba, 323
 New York, New York, U.S.A., 1,423

Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,228
 Nuevitas, Cuba, 398
 Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,395
 Savannah, Georgia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,012

PORT APRA, GUAM. See Apra.

PORT ARTHUR, CHINA. See Lushun.

PORT ARTHUR, TEXAS, U.S.A.
 (29°52'00" N., 93°56'00" W.) to:

Junction Points*

Straits of Florida, 677
 Yucatan Channel, 681

Ports

Colon, Panama, 1,485
 Habana, Cuba, 749
 Puerto Mexico, Mexico, 708
 Tampico, Mexico, 522
 Tuxpan, Mexico, 572
 Veracruz, Mexico, 659

PORT AU PRINCE, HAITI
 (18°33'30" N., 72°21'30" W.) to:

Junction Points*

Bishop Rock, England (track A), 3,725
 Fastnet, Ireland (track A), 3,623
 Fastnet, Ireland (track B), 3,620
 Inishtrahull, Ireland (track A), 3,749
 Inishtrahull, Ireland (track B), 3,739
 Inishtrahull, Ireland (track C), 3,723
 Panama, Panama, 817
 Pentland Firth, Scotland (track A), 3,954
 Pentland Firth, Scotland (track B), 3,939
 Pentland Firth, Scotland (track C), 3,903
 Strait of Gibraltar, 3,757
 Straits of Florida, 701
 Yucatan Channel, 741

Ports

Alvaro Obregon, Mexico, 1,292
 Baltimore, Maryland, U.S.A., 1,301
 Barranquilla, Colombia, 592

*JUNCTION POINT.—See Preface for use of junction points.

PORT AUGUSTA

Belem, Brazil, 2,258
 Belize, British Honduras (south of Jamaica), 953
 Belize, British Honduras (north of Jamaica), 933
 Boston, Massachusetts, U.S.A., 1,557
 Bridgetown, Barbados, 1,070
 Buenos Aires, Argentina, 5,322
 Campeche, Mexico, 1,140
 Cap Haitien, Haiti, 195
 Cardenas, Cuba, 603
 Carmen, Mexico, 1,219
 Cartagena, Colombia, 639
 Castries, St. Lucia (via Windward Passage and Mona Passage), 950
 Charleston, South Carolina, U.S.A., 961
 Charlotte Amalie, Virgin Islands, 628
 Cienfuegos, Cuba, 534
 Gonaives, Haiti, 70
 Guantanamo, Cuba, 179
 Gulfport, Mississippi, U.S.A. (via Windward Passage), 1,176
 Habana, Cuba, 662
 Halifax, Canada, 1,671
 Hamilton, Bermuda, 1,016
 Jacmel, Haiti, 271
 Jeremie, Haiti, 100
 Key West, Florida, U.S.A. (via Old Bahama Channel), 650
 Kingston, Jamaica, 277
 La Guaira, Venezuela, 801
 Les Cayes, Haiti, 202
 Manzanillo, Cuba, 372
 Matanzas, Cuba, 617
 Miami, Florida, U.S.A., 643
 Nassau, Bahamas, 564
 New York, New York, U.S.A., 1,372
 Norfolk, Virginia, U.S.A., 1,178
 Nuevitas, Cuba, 348
 Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,343
 Pointe a Pitre, Guadeloupe (via Windward Passage and Mona Passage), 889
 Pointe a Pitre, Guadeloupe (south of Hispaniola), 945
 Port of Spain, Trinidad, 1,053
 Port de Paix, Haiti, 144
 Puerto Cabello, Venezuela, 769
 Puerto Colombia, Colombia, 586
 Rio de Janeiro, Brazil, 4,221
 San Juan, Puerto Rico, 552
 San Juan del Norte, Nicaragua, 840
 San Pedro de Macoris, Dominican Republic, 473
 Santo Domingo, Dominican Republic, 449
 Tuxpan, Mexico, 1,428
 Willemstad, Curacao, 647

PORT AUGUSTA, AUSTRALIA
(32°29'40" S., 137°45'30" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 1,237
 Singapore, 3,580

Ports
 Hobart, Tasmania, 947
 Lyttelton, New Zealand, 2,082
 Noumea, New Caledonia, 2,179
 Sydney, Australia, 1,164

PORT BLAIR, ANDAMAN ISLANDS
(11°40'00" N., 92°46'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 5,075
 Port Said, U.A.R., 4,353
 Singapore, 929

Ports
 Calcutta, India, 775
 Madras, India, 758

PORT BUCHANAN, LIBERIA
(5°51'30" N., 10°03'30" W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 2,912
 Ushant, France, 2,904

Ports
 Dakar, Senegal, 755
 Takoradi, Ghana, 197

PORT BUENAVENTURA, COLOMBIA. See Buenaventura.

PORT CASTRIES, ST. LUCIA. See Castries, St. Lucia.

PORT CHURCHILL, CANADA. See Churchill.

PORT DARWIN, AUSTRALIA. See Darwin.

PORT DE PAIX, HAITI
(19°57'15" N., 72°50'10" W.) to:

Ports
 Kingston, Jamaica, 432
 Port au Prince, Haiti, 144
 San Juan, Puerto Rico, 398
 Santo Domingo, Dominican Republic, 543

PORT GALLEGOS 143

PORT DENISON, AUSTRALIA. See Bowen.

PORT DES GALETS, REUNION ISLAND
(20°55'15" S., 55°17'30" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 3,241
 Cape of Good Hope, Republic of South Africa, 2,120
 Port Said, U.S.R., 3,747
 Singapore, 3,450

Ports
 Durban, Republic of South Africa, 1,418

PORT ELIZABETH, REPUBLIC OF SOUTH AFRICA
(33°57'40" S., 25°38'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 390
 Port Said, U.A.R., 4,959
 Singapore, 5,209

Ports
 Belawan, Indonesia, 4,876
 Darwin, Australia, 5,767
 East London, Republic of South Africa, 131
 Malacca, Malaysia, 5,094
 Penang, Malaysia, 4,921
 Sabang, Indonesia, 4,610
 Simons Bay, Republic of South Africa, 391

PORT ETIENNE, MAURITANIA
(20°40'00" N., 17°04'12" W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 4,018
 Ushant, France, 1,826

Ports
 Casablanca, Morocco, 1,032
 Dakar, Senegal, 394

PORT GALLEGOS, ARGENTINA
(51°36'40" S., 69°12'10" W.) to:

Junction Points*
 Panama, Panama, 6,455
 Punta Arenas, Chile, 202

Ports
 Buenos Aires, Argentina, 1,231
 Stanley, Falkland Islands, 460

*JUNCTION POINT.—See Preface for use of junction points.

PORT GENTIL, GABON
(0°43'00" S., 8°47'30" E.) to:

Ports

Boma, Republic of the Congo, 470
Cabinda, Cabinda, 393
Douala, Cameroon, 297
Kribi, Cameroon, 231
Pointe Ndre, Gabon, 341

PORT HARCOURT, NIGERIA
(4°46'15" N., 7°00'12" E.) to:

Junction Points*

Ushant, France, 3,974

Ports

Freetown, Sierra Leone, 1,397
Horta, Azores, 3,391
Lagos, Nigeria, 318
Luanda, Angola, 941
Pointe Noire, Gabon, 677

PORT HUENEME, CALIFORNIA,
U.S.A.
(34°09'00" N., 119°12'24" W.) to:

Junction Points*

Panama, Panama, 2,958

Ports

Ensenada, Mexico, 194
Honolulu, Hawaii, U.S.A., 2,170
Sweeper Cove, Alaska, U.S.A., 2,686
Vancouver, Canada, 1,102

PORT IBRAHIM, U.A.R. See Bur
Ibrahim.

PORT KEMBLA, AUSTRALIA
(34°28'30" S., 150°53'00" E.) to:

Junction Points*

Lombok Strait, Indonesia, 3,388
Torres Strait, Australia, 1,817

Ports

Hobart, Tasmania, 593
Nukualofa, Tonga Islands, 1,987
Wellington, New Zealand, 1,229

PORT LEGASPI, PHILIPPINES
(13°09'00" N., 123°45'30" E.) to:

Junction Points*

Lombok Strait, Indonesia, 1,667
Singapore, 1,611

Ports

Iloilo, Philippines, 226

Manila, Philippines, 370
Sai Gon, Vietnam, 1,177

PORT LINCOLN, AUSTRALIA
(34°43'00" S., 135°52'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,100
Torres Strait, Australia, 2,811

Ports

Albany, Australia, 953
Hobart, Tasmania, 830
Melbourne, Australia, 588

PORT LOUIS, MAURITIUS
(20°09'15" S., 57°29'45" E.) to:

Junction Points*

Cape Leeuwin, Australia, 3,165
Cape of Good Hope, Republic of South
Africa, 2,266
Singapore, 3,333
Torres Strait, Australia, 4,933

Ports

Adelaide, Australia, 4,323
Aden, Aden Protectorate, 2,341
Albany, Australia, 3,340
Beira, Mozambique, 1,448
Belawan, Indonesia, 2,997
Bombay, India, 2,517
Calcutta, India, 3,212
Colombo, Ceylon, 2,098
Darwin, Australia (south of Scott
Reef), 4,246
Darwin, Australia (north of Scott
Reef), 4,252
Durban, Republic of South Africa,
1,560
Fort Dauphin, Malagasy Republic, 654
Fremantle, Australia (north of
Mauritius), 3,202
Fremantle, Australia (south of
Mauritius), 3,217
Lourenco Marques, Mozambique, 1,448
Malacca, Malaysia, 3,215
Penang, Malaysia, 3,042
Sabang, Indonesia, 2,731
Tamatave, Malagasy Republic, 474
Victoria, Seychelles, 943
Wellington, New Zealand, 5,900
Zanzibar, Zanzibar, 1,388

PORT LYAUTEY, MOROCCO. See
Kenitra.

PORT LYTTTELTON, NEW ZEA-
LAND. See Lyttelton.

PORT MAGDALENA, MEXICO. See
Bahia Magdalena.

PORT MAHON, BALEARIC IS-
LANDS. See Mahon.

PORT MORESBY, PAPUA
(9°28'45" S., 147°08'40" E.) to:

Ports

Catherine Hill Bay, Australia, 1,695
Gladstone Harbor, Australia, 1,389
Koniya, Ryukyu Islands, 3,063
Lae, New Guinea, 2,635
Mackay, Australia, 1,168
Omura, Bonin Islands (via Torres
Strait), 3,164
Omura, Bonin Islands (via China
Strait and west of New Ireland),
2,712
Port Pirie, Australia, 2,754
Townsville, Australia, 595

PORT NATAL, REPUBLIC OF
SOUTH AFRICA. See Durban.

PORT NECHES, TEXAS, U.S.A.
(29°59'35" N., 93°56'20" W.)

Add 13 miles to Port Arthur distances.

PORT NEWARK, NEW JERSEY,
U.S.A.
(40°42'00" N., 74°09'00" W.)

For ocean distances, add 4½ miles to
New York distances.

PORT NIEVRE, MALAGASY RE-
PUBLIC. See Antsirana.

PORT NOLLOTH, REPUBLIC OF
SOUTH AFRICA
(29°15'00" S., 16°51'21" E.) to:

Junction Points*

Cape of Good Hope, Republic of South
Africa, 325
Ushant, France, 5,516

Ports

Cape Town, Republic of South Africa,
301
Matadi, Republic of the Congo, 1,559

*JUNCTION POINT.—See Preface for use of junction points.

PORT OF SPAIN, TRINIDAD

(10°38'45'' N., 61°31'00'' W.) to:

Junction Points*

Bishop Rock, England, 3,603
 Cape of Good Hope, Republic of South Africa, 5,393
 Inishtrahull, Ireland, 3,706
 Montreal, Canada (via Cabot Strait), 2,901
 Panama, Panama, 1,202
 Pentland Firth, Scotland, 3,913
 Punta Arenas, Chile, 5,430
 Strait of Gibraltar, 3,403
 Straits of Florida (via Mona Passage), 1,533
 Yucatan Channel, 1,517

Ports

Alvaro Obregon, Mexico, 2,060
 Baltimore, Maryland, U.S.A., 1,918
 Barcelona, Venezuela, 218
 Basseterre, St. Christopher, 419
 Belem, Brazil, 1,212
 Belize, British Honduras, 1,637
 Boston, Massachusetts, U.S.A., 2,022
 Bridgetown, Barbados (via Boca Grande), 211
 Brunswick, Georgia, U.S.A., 1,694
 Campeche, Mexico, 1,913
 Cap Haitien, Haiti, 888
 Cape Town, Republic of South Africa, 5,387
 Carmen, Mexico, 1,992
 Cartagena, Colombia, 932
 Carupano, Venezuela, 109
 Castries, St. Lucia (east of Grenadine Islands), 231
 Castries, St. Lucia (west of Grenadine Islands), 230
 Catia la Mar, Venezuela, 335
 Charleston, South Carolina, U.S.A., 1,682
 Charlotte Amalie, Virgin Islands, 518
 Cienfuegos, Cuba, 1,310
 Colon, Panama, 1,159
 Covenas, Colombia, 968
 Dakar, Senegal, 2,628
 Elizabeth Harbor, Bahamas, 1,170
 Freetown, Sierra Leone, 2,896
 Funchal, Madeira Island, 2,819
 Georgetown, British Guiana (via Serpents Mouth), 376
 Guantanamo, Cuba, 987
 Habana, Cuba (via Old Bahama Channel and Mona Passage), 1,494
 Halifax, Canada, 2,059
 Hamilton, Bermuda, 1,346
 Horta, Azores, 2,461
 Isabel Segunda, Isla de Vieques, 531

Jacksonville, Florida, U.S.A., 1,685
 Key West, Florida, U.S.A. (via Mona Passage and Old Bahama Channel), 1,484
 Kingston, Jamaica, 1,003
 La Guaira, Venezuela (south of Isla de Margarita), 329
 Lagos, Nigeria, 3,950
 Limon, Costa Rica, 1,313
 Lisboa, Portugal, 3,287
 Miami, Florida, U.S.A., 1,482
 Monrovia, Liberia, 3,045
 New Amsterdam, British Guiana, 437
 New York, New York, U.S.A. (via Virgin Passage), 1,939
 Norfolk, Virginia, U.S.A., 1,799
 Oranjestad, St. Eustatius, 432
 Paramaribo, Surinam, 546
 Philadelphia, Pennsylvania, U.S.A. (via Virgin Passage), 1,938
 Pointe a Pitre, Guadeloupe, 358
 Port au Prince, Haiti, 1,053
 Portsmouth, New Hampshire, U.S.A., 2,024
 Puerto Cabello, Venezuela, 395
 Puerto Cortes, Honduras, 1,599
 Puerto la Cruz, Venezuela, 214
 Puerto Mexico, Mexico, 2,137
 Puerto Sucre, Venezuela, 200
 Punta Cardon, Venezuela, 574
 Rio de Janeiro, Brazil, 3,271
 Roosevelt Roads, Puerto Rico, 525
 St. Georges, Grenada, 102
 St. John, Canada, 2,113
 St. Johns, Antigua, 411
 St. John's, Canada, 2,288
 St. Louis, Marie Galante, 368
 San Juan, Puerto Rico, 574
 San Juan del Norte, Nicaragua, 1,342
 Santa Cruz de Tenerife, Canary Islands, 2,804
 Santo Domingo, Dominican Republic, 681
 Savannah, Georgia, U.S.A., 1,714
 Sint Nicolaas, Aruba, 515
 Sydney, Canada, 2,189
 Takoradi, Ghana, 3,632
 Turiamo, Venezuela, 384
 Tuxpan, Mexico, 2,201
 Veracruz, Mexico, 2,182
 Willemstad, Curacao, 456
 Wilmington, North Carolina, U.S.A., 1,703

PORT PAIX, HAITI. See Port de Paix.

PORT PIRIE, AUSTRALIA

(33°10'20'' S., 138°00'45'' E.) to:

Junction Points*

Panama, Panama, 8,467
 Singapore, 3,564

Ports

Adelaide, Australia, 246
 Melbourne, Australia, 689
 Port Moresby, Papua, 2,754

PORT PLATA, DOMINICAN REPUBLIC

(19°49'00'' N., 70°41'30'' W.) to:

Junction Points*

Panama, Panama, 942
 Straits of Florida, 764

Ports

Baltimore, Maryland, U.S.A., 1,215
 Guantanamo, Cuba (via Windward Passage), 262
 New York, New York, U.S.A., 1,270
 Philadelphia, Pennsylvania, U.S.A., 1,250
 Santiago de Cuba, Cuba, 311
 Santo Domingo, Dominican Republic, 295

PORT REFUGE, COCOS ISLANDS

(12°05'20'' S., 96°51'54'' E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,678
 Cape of Good Hope, Republic of South Africa, 4,428
 Lombok Strait, Indonesia, 1,132
 Sunda Strait, Indonesia, 647

Ports

Colombo, Ceylon, 1,539

PORT ROYAL, JAMAICA

(17°56'00'' N., 76°51'00'' W.)

Subtract 5 miles from Kingston distances.

PORT SAFAGA, U.A.R. See Bur Safajah.

PORT SAID, UNITED ARAB REPUBLIC*

(31°16'00'' N., 32°19'00'' E.) to:

Junction Points*

Cape Leeuwin, Australia (October-April), 6,345
 Cape Leeuwin, Australia (May-September), 6,389

*JUNCTION POINT.—See Preface for use of junction points.

Cape of Good Hope, Republic of South Africa, 5,340
 Singapore (October–April), 5,018
 Singapore (May–September), 5,035
 Strait of Gibraltar, 1,943
 Sunda Strait, Indonesia (via One and Half Degree Channel, October–April), 5,225
 Sunda Strait, Indonesia (via Eight Degree Channel, May–September), 5,232
 Torres Strait, Australia (via One and Half Degree Channel, October–April), 7,409
 Torres Strait, Australia (via Eight Degree Channel, May–September), 7,423

Ports

Ad Damman, Saudi Arabia, 3,142
 Aden, Aden Protectorate, 1,400
 Ajaccio, Corsica, 1,355
 Akyab, Burma, 4,672
 Al Aqabah, Jordan, 380
 Al Bahrayn, Bahrain, 3,132
 Al Basrah, Iraq, 3,371
 Al Gurdagah, U.A.R., 278
 Al Hammamat, Tunisia, 1,138
 Al Hudaydah, Yemen, 1,162
 Al Khums, Libya, 941
 Al Ladhiqiyah, Syria, 310
 Al Mina Al Bayda, Syria, 314
 Al Mukha, Yemen, 1,263
 Alcudia, Balearic Islands, 1,536
 Alexandria, U.A.R., 164
 Alexandroupolis, Greece, 699
 Algeciras, Spain, 1,927
 Alger, Algeria, 1,514
 Alicante, Spain, 1,680
 Almeria, Spain, 1,780
 Ancona, Italy (via Corinth Canal), 1,196
 Ancona, Italy (south of Greece), 1,206
 Annaba, Algeria, 1,289
 Antalya, Turkey, 346
 Antsirana, Malagasy Republic, 3,240
 Ao Phuket, Thailand, 4,629
 Arzew, Algeria, 1,692
 As Sukhayrah, Tunisia, 1,156
 Ashdod Yam, Israel, 126
 Assab, Ethiopia, 1,258
 Augusta, Sicily, 932
 Bandar Abbas, Iran, 2,842
 Bandar-E Shapur, 3,322
 Banghazi, Libya, 673
 Baniyas, Syria, 299
 Barcelona, Spain, 1,600
 Bari, Italy (via Corinth Canal), 989
 Bari, Italy (south of Greece), 999
 Barletta, Italy, 1,023
 Bassein, Burma, 4,638
 Bastia, Corsica, 1,337

Batumi, U.S.S.R., 1,391
 Bayrut, Lebanon, 230
 Beaulieu, France, 1,453
 Beira, Mozambique, 3,990
 Belawan, Indonesia, 4,668
 Bejaia, Algeria, 1,423
 Bizerte, Tunisia, 1,184
 Bombay, India (October–April), 3,049
 Bombay, India (May–September), 3,068
 Bombay, India (low power, southwest monsoon, June–August), 3,743
 Bonifacio, Corsica, 1,307
 Brindisi, Italy, 941
 Bunbury, Australia, 6,343
 Bur Safajah, U.A.R., 310
 Cagliari, Sardinia, 1,255
 Calcutta, India (October–April, south of Socotra), 4,695
 Calcutta, India (May–September, south of Socotra), 4,816
 Calcutta, India (May–September, north of Socotra), 4,712
 Calcutta, India (alternate, May–September, north of Socotra), 4,807
 Calcutta, India (low power, May–September, south of Socotra), 4,876
 Cannes, France, 1,472
 Cartagena, Spain, 1,705
 Castellamare di Stabia, Italy, 1,114
 Catania, Sicily, 942
 Ceuta, Morocco, 1,923
 Chaina, Pakistan, 4,705
 Chioggia, Italy, 1,307
 Chittagong, Pakistan, 4,739
 Civitavecchia, Italy, 1,243
 Cochin, India, 3,237
 Colombo, Ceylon (October–April), 3,481
 Colombo, Ceylon (May–September), 3,494
 Constanta, Rumania, 1,000
 Crotona, Italy, 896
 Dar es Salaam, Tanganyika, 3,238
 Darnah, Libya, 514
 Darwin, Australia (via One and Half Degree Channel, October–April), 6,749
 Darwin, Australia (via Eight Degree Channel, May–September), 6,764
 Derince, Turkey, 837
 Dikili, Turkey, 596
 Djakarta, Indonesia, 5,293
 Djibouti, French Somaliland, 1,374
 Dubrovnik, Yugoslavia (via Corinth Canal), 1,025
 Dubrovnik, Yugoslavia (south of Greece), 1,038
 Dumai, Indonesia, 4,943
 Durban, Republic of South Africa, 4,567

Durres, Albania, 951
 East London, Republic of South Africa, 4,830
 Eilat, Israel, 381
 Ermoupolis, Greece, 535
 Famagusta, Cyprus, 257
 Fethiye, Turkey, 375
 Fort Dauphin, Malagasy Republic, 4,035
 Fremantle, Australia, 6,310
 Gaeta, Italy, 1,150
 Gallipoli, Italy, 908
 Genova, Italy, 1,426
 Ghazaouet, Algeria, 1,784
 Gibraltar, 1,925
 Golfe-Juan, France, 1,462
 Golfo di Oristano, Sardinia, 1,343
 Haifa, Israel, 171
 Hyeres, Greece, 1,474
 Inhambane, Mozambique, 4,138
 Iraklion, Crete, 455
 Iskenderum, Turkey, 381
 Istanbul, Turkey, 804
 Izmir, Turkey, 608
 Jaffa, Israel, 135
 Jazireh-ye Khark, Iran, 3,200
 Juddah, Saudi Arabia, 722
 Kalamai, Greece, 644
 Karachi, Pakistan, 2,865
 Kavala, Greece, 714
 Kerch, U.S.S.R., 1,238
 Kerkira, Greece (via Corinth Canal), 826
 Kerkira, Greece (south of Greece), 848
 Khalkis, Greece, 630
 Khania, Crete, 515
 Khawr al Ama, Neutral Zone, Persian Gulf, 3,262
 Kyrenia, Cyprus, 297
 La Spezia, Italy, 1,391
 Larnaca, Cyprus, 231
 Limassol, Cyprus, 208
 Limin Khiou, Greece, 540
 Livorno, Italy, 1,355
 Lourenco Marques, Mozambique, 4,348
 Madras, India (October–April, south of Socotra), 4,048
 Madras, India (May–September, north of Socotra), 4,065
 Mahon, Balearic Islands, 1,484
 Majunga, Malagasy Republic, 3,471
 Malacca, Malaysia, 4,906
 Malaga, Spain, 1,873
 Manakara, Malagasy Republic, 3,842
 Marsala, Sicily, 1,081
 Marsaxlokk, Malta, 942
 Marseille, France, 1,518
 Massaua, Ethiopia, 1,041
 Matruh, U.A.R., 281
 Melilla, Morocco, 1,821

Mentone, France, 791
 Mers El Kebir, Algeria, 1,714
 Mersin, Turkey, 359
 Messina, Sicily, 945
 Mina Abd Allah, Kuwait, 3,283
 Mina al Ahmadi, Kuwait, 3,286
 Mina Su'ud, Neutral Zone, Persian Gulf, 3,264
 Mitilini, Greece, 592
 Mocambique, Mozambique, 3,522
 Mogadiscio, Somali Republic, 2,493
 Mombasa, Kenya, 3,006
 Monaco, Monaco, 1,450
 Monopoli, Italy, 953
 Mormugao, India, 3,078
 Mostaganem, Algeria, 1,678
 Moulmein, Burma, 4,742
 Mtwara, Tanganyika, 3,265
 Napoli, Italy, 1,116
 Navplion, Greece, 613
 Nice, France, 1,456
 Novorossiysk, U.S.S.R., 1,260
 Odessa, U.S.S.R., 1,152
 Okha, India, 2,887
 Olbia, Sardinia, 1,278
 Oran, Algeria, 1,711
 Palermo, Sicily, 1,061
 Palma, Balearic Islands, 1,555
 Paphos, Cyprus, 482
 Patrai, Greece (via Corinth Canal), 690
 Patrai, Greece (via south of Greece), 762
 Penang, Malaysia, 4,733
 Pescara, Italy (south of Greece), 1,141
 Piraeus, Greece, 599
 Ploce, Yugoslavia, 1,132
 Pollenza, Balearic Islands, 1,535
 Port Blair, Andaman Islands, 4,353
 Port des Galets, Reunion Islands, 3,747
 Port Elizabeth, Republic of South Africa, 4,959
 Port St. Louis du Rhone, France, 1,535
 Port Sudan, 788
 Port Swettenham, Malaysia, 4,817
 Port Vendres, France, 1,583
 Porto di Licata, Sicily, 993
 Porto di Manfredonia, Italy, 1,045
 Porto di Milazzo, Sicily, 973
 Porto di Reggio Calabria, Sicily, 939
 Porto Empedocle, Sicily, 1,017
 Porto Vecchio di Piombino, Italy, 1,315
 Pozzuoli, Italy, 1,118
 Preveza, Greece, 806
 Pula, Yugoslavia (via Corinth Canal), 1,244
 Pula, Yugoslavia (south of Greece), 1,256
 Qabis, Tunisia, 1,149

Quelimane, Mozambique, 3,839
 Rangoon, Burma (May–September, north of Socotra), 4,723
 Rangoon, Burma (October–April, south of Socotra), 4,705
 Ra's al Khafji, Neutral Zone, Persian Gulf, 3,260
 Ra's as Sidr, U.A.R., 112
 Ra's at Tannurah, Saudi Arabia, 3,162
 Ra's Gharib, U.A.R., 187
 Rethimnon, Crete, 489
 Rijeka, Yugoslavia (via Corinth Canal), 1,263
 Rijeka, Yugoslavia (south of Greece), 1,276
 Rodhos, Rodhos, 376
 Rostov-na-Donu, U.S.S.R., 1,440
 Sabang, Indonesia, 4,422
 St. Raphael, France, 1,475
 Salamis, Greece, 614
 Salerno, Italy, 1,098
 Sant Antioco Ponti, Sardinia, 1,282
 Sarande, Albania, 863
 Savona, Italy, 1,437
 Sayda, Lebanon, 205
 Sete, France, 1,577
 Sevastopol, U.S.S.R., 1,105
 Sfax, Tunisia, 1,131
 Shengjin, Albania, 988
 Sibenik, Yugoslavia (via Corinth Canal), 1,136
 Sibenik, Yugoslavia (south of Greece), 1,148
 Simons Bay, Republic of South Africa, 5,315
 Siracusa, Sicily, 924
 Skikda, Algeria, 1,337
 Soudha, Ormos Soudhas, Crete, 507
 Sousse, Tunisia, 1,133
 Split, Yugoslavia (via Corinth Canal), 1,121
 Split, Yugoslavia (south of Greece), 1,133
 Suakin, Sudan, 813
 Sur, Lebanon, 191
 Tamatave, Malagasy Republic, 3,598
 Tanga, Tanganyika, 3,068
 Taormina, Sicily, 933
 Tarabulus, Lebanon, 268
 Tarabulus, Libya, 998
 Taranto, Italy (via Corinth Canal), 951
 Taranto, Italy (south of Greece), 954
 Tarragona, Spain, 1,634
 Terracina, Italy, 1,162
 Thessaloniki, Greece, 741
 Toulon, France, 1,486
 Trapani, Sicily, 1,100
 Trieste, Free Territory (via Corinth Canal), 1,297

Trieste, Free Territory (south of Greece), 1,310
 Tubruq, Libya, 445
 Tulear, Malagasy Republic, 3,966
 Tunis, Tunisia, 1,172
 Umm Said, Qatar, 3,091
 Valencia, Spain, 1,679
 Valletta, Malta, 946
 Venezia, Italy (via Corinth Canal), 1,307
 Venezia, Italy (south of Greece), 1,317
 Viareggio, Italy, 1,716
 Villa San Giovanni, Italy, 944
 Villa Sanjurjo, Morocco, 1,868
 Villefranche, France, 1,455
 Vlones, Albania, 973
 Volos, Greece, 683
 Yumurtalik, Turkey, 372
 Zadar, Yugoslavia, 1,214

PORT ST. LOUIS DU RHONE, FRANCE

(43°23'00" N., 4°48'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,535
 Strait of Gibraltar, 703

Ports

Annaba, Algeria, 419
 Barcelona, Spain, 178
 Genova, Italy, 221

PORT SUDAN, SUDAN

(19°37'00" N., 37°13'45" E.) to:

Junction Points*

Port Said, U.A.R., 788

Ports

Aden, Aden Protectorate, 668
 Al Mukha, Yemen, 524
 Assab, Ethiopia, 524
 Bur Safajah, U.A.R., 508
 Juddah, Saudi Arabia, 161
 Massaua, Ethiopia, 306

PORT SWETTENHAM, MALAYA, MALAYSIA

(3°00'00" N., 101°23'00" E.) to:

Junction Points*

Port Said, U.A.R., 4,817
 Singapore, 210

Ports

Calcutta, India, 1,444
 Johore Bahru, Malaysia, 206

*JUNCTION POINT.—See Preface for use of junction points.

Madras, India, 1,384
Penang, Malaysia, 172

PORT TALBOT, WALES
(51°35'25" N., 3°47'24" W.) to:

Junction Points*
Bishop Rock, England, 149
Inishtrahull, Ireland, 331

Ports
Dublin, Ireland, 179
Liverpool, England, 244

PORT TAMPA, FLORIDA, U.S.A.
(21°51'40" N., 82°33'20" W.)

Subtract 5 miles from Tampa distances.

PORT TAUFUQ, U.A.R. See Bur Ibrahim.

PORT THEWFIK, U.A.R. See Bur Ibrahim.

PORT TOWNSEND, WASHINGTON, U.S.A.
(48°06'30" N., 122°45'00" W.)

Subtract 36 miles from Seattle distances.

PORT- VENDRES, FRANCE
(42°31'30" N., 3°07'00" E.) to:

Junction Points*
Port Said, U.A.R., 1,583
Strait of Gibraltar, 633

Ports
Barcelona, Spain, 108
Marseille, France, 109
Napoli, Italy, 521

PORTLAND, AUSTRALIA
(38°20'30" S., 141°37'00" E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,304
Torres Strait, Australia, 2,429

Ports
Adelaide, Australia, 321
Hobart, Tasmania, 540
Melbourne, Australia, 206

PORTLAND, ENGLAND
(50°35'00" N., 2°26'00" W.) to:

Junction Points*
Bishop Rock, England, 181
Kiel Canal (east end), Germany, 565
Skagens Odde, Denmark, 682

Ports
Aberdeen, Scotland, 564
Amsterdam, Netherlands, 316
Antwerpen, Belgium, 292
Bergen, Norway, 745
Bremerhaven, Germany, 499
Calais, France, 170
Dover, England, 155
Dundee, Scotland, 547
Dunkerque, France, 190
Egersund, Norway, 632
Emden, Germany, 439
Esbjerg, Denmark, 525
Hamburg, Germany, 554
Hartlepool, England, 428
Hull, England, 368
Kristiansand, Norway, 643
Leith, Scotland, 545
London, England, 247
Newcastle, England, 453
Oostende, Belgium, 214
Oslo, Norway, 795
Rotterdam, Netherlands, 293
Southampton, England, 57
Stavanger, Norway, 672
Wilhelmshaven, Germany, 483
Zeebrugge, Belgium, 229

PORTLAND, MAINE, U.S.A.
(43°39'30" N., 70°14'45" W.) to:

Junction Points*
Montreal, Canada, 1,206
Panama, Panama (via Crooked Island Passage and Windward Passage), 2,241
Pentland Firth, Scotland (track A), 3,123
Pentland Firth, Scotland (track B), 3,050
Pentland Firth, Scotland (track C), 2,910
Punta Arenas, Chile, 6,949
Straits of Florida, 1,450

Ports
Belize, British Honduras, 1,967
Buenos Aires, Argentina, 5,873
Cape Town, Republic of South Africa, 6,709
Charlotte Amalie, Virgin Islands, 1,557
Charlottetown, Canada (via Strait of Canso), 579
Colon, Panama, 2,198

Halifax, Canada, 338
Kingston, Jamaica, 1,679
Maracaibo, Venezuela, 2,042
Montevideo, Uruguay, 5,759
Murmansk, U.S.S.R., 3,677
Recife, Brazil, 3,700
Rio de Janeiro, Brazil, 4,772
St. John, Canada, 215
Salvador, Brazil, 4,091
San Juan, Puerto Rico, 1,531
Santos, Brazil, 4,959
Sydney, Canada, 556
Willemstad, Curacao, 1,921
Yarmouth, Canada, 185

PORTLAND, OREGON, U.S.A.
(45°33'00" N., 122°41'45" W.) to:

Junction Points*
Panama, Panama, 3,869
Punta Arenas, Chile, 6,813
Singapore, 7,142
Wilson Promontory, Australia, 7,121

Ports
Antofagasta, Chile, 5,383
Auckland, New Zealand, 6,075
Brisbane, Australia, 6,421
Brito, Nicaragua, 3,333
Callao, Peru, 4,611
Cebu, Philippines, 6,001
Djakarta, Indonesia (via Balintang Channel and composite), 7,415
Guayaquil, Ecuador, 4,169
Honolulu, Hawaii, U.S.A., 2,332
Kobe, Japan, 4,590
Manila, Philippines (via Babuyan Channel), 6,024
Newcastle, Australia, 6,833
Pago Pago, American Samoa, 4,525
Sydney, Australia, 6,737
Ta-lien, China, 5,240
Valparaiso, Chile, 5,764
Vancouver, Canada, 371
Vladivostok, U.S.S.R. (north of the Aleutian Islands), 4,278
Wellington, New Zealand, 6,327
Yokohama, Japan, 4,323

PORTLAND BIGHT, JAMAICA
(17°50'00" N., 77°06'00" W.) to:

Ports
Colon, Panama, 536

PORTO, PORTUGAL
(41°08'30" N., 8°41'00" W.) to:

Junction Points*
Strait of Gibraltar, 432
Ushant, France, 494

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Cadiz, Spain, 399
 Dakar, Senegal, 1,682
 Freetown, Sierra Leone, 2,161
 Funchal, Madeira Island, 650
 Lisboa, Portugal, 176
 New York, New York, U.S.A., 2,923
 Ponta Delgada, Azores, 815
 Puerto de Pasajes, Spain, 473
 Santa Cruz de Tenerife, Canary Islands, 849
 Vigo, Spain, 74

PORTO ALEGRE, BRAZIL
 (30°02'00" S., 51°14'00" W.) to:

Junction Points*
 Cape of Good Hope, Republic of Africa, 3,625
 Panama, Panama, 5,148
 Punta Arenas, Chile, 1,686

Ports
 Montevideo, Uruguay, 482
 Santos, Brazil, 758

PORTO AMBOIM, ANGOLIA. See Amboim.

PORTO DE LEIXOES, PORTUGAL
 (41°10'40" N., 8°42'00" W.) to:

Ports
 Gijon, Spain, 309
 Lisboa, Portugal, 180
 Puerto de Pasajes, Spain, 473
 Rota, Spain, 454
 Tangier, Morocco, 436

PORTO DI LICATA, SICILY, ITALY
 (37°05'15" N., 13°56'30" E.) to:

Junction Points*
 Port Said, U.A.R., 993
 Strait of Gibraltar, 958

Ports
 Messina, Sicily, 173
 Tunis, Tunisia, 187
 Valletta, Malta, 78

PORTO DI MANFREDONIA, ITALY
 (41°37'15" N., 15°55'30" E.) to:

Junction Points*
 Port Said, U.A.R., 1,045
 Strait of Gibraltar, 1,419

Ports
 Ancona, Italy, 195

Dubrovnik, Yugoslavia, 117
 Durres, Albania, 161

PORTO DI MILAZZO, SICILY, ITALY
 (38°13'00" N., 15°15'00" E.) to:

Junction Points*
 Port Said, U.A.R., 973
 Strait of Gibraltar, 1,025

Ports
 Napoli, Italy, 54
 Palermo, Sicily, 97
 Taranto, Italy, 316

PORTO DI REGGIO CALABRIA, SICILY, ITALY
 (38°07'35" N., 15°39'00" E.) to:

Junction Points*
 Port Said, U.A.R., 939
 Strait of Gibraltar, 1,052

Ports
 Banghazi, Libya, 425
 Napoli, Italy, 179
 Palermo, Sicily, 124

PORTO DI VADO, ITALY. See Vado Ligure.

PORTO EMPEDOCLE, SICILY, ITALY
 (37°16'30" N., 13°32'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,017
 Strait of Gibraltar, 937

Ports
 Tarabulus, Libya, 263
 Tunis, Tunisia, 167
 Valletta, Malta, 97

PORTO GRANDE, SAO VICENTE, CAPE VERDE ISLANDS
 (16°53'00" N., 25°00'20" W.) to:

Junction Points*
 Bishop Rock, England, 2,165
 Cape of Good Hope, Republic of South Africa, 3,958
 Strait of Gibraltar, 1,539
 Straits of Florida, 3,308
 Ushant, France, 2,137

Ports
 Accra, Ghana, 1,760
 Baltimore, Maryland, U.S.A., 3,095

Bathurst, Gambia, 553
 Benguela, Angola, 2,101
 Bissau, Portuguese Guinea, 651
 Cadiz, Spain, 1,547
 Casablanca, Morocco, 1,387
 Colon, Panama, 3,246
 Freetown, Sierra Leone, 871
 Funchal, Madeira Island, 1,043
 Guantanamo, Cuba, 2,853
 Horta, Azores, 1,316
 Huelva, Spain, 1,561
 Lagos, Nigeria, 1,991
 Lisboa, Portugal, 1,555
 Luanda, Angola, 2,778
 Mocamedes, Angola, 2,939
 Monrovia, Liberia, 1,069
 New York, New York, U.S.A., 2,913
 Norfolk, Virginia, U.S.A., 2,971
 Philadelphia, Pennsylvania, U.S.A., 3,011
 Ponta Delgada, Azores, 1,253
 Rio de Janeiro, Brazil, 2,687
 St. Louis, Senegal, 496
 Santa Cruz de Tenerife, Canary Islands, 849
 Sao Tome, Gulf of Guinea, 2,208
 Savannah, Georgia, U.S.A., 3,169
 Sidi Ifni, Ifni, 1,117
 Sydney, Canada, 2,503
 Takoradi, Ghana, 1,673
 Tangier, Morocco, 1,536
 Vigo, Spain, 1,737
 Villa Cisneros, Spanish Sahara, 650
 Wilmington, North Carolina, U.S.A., 3,057

PORTO NOVO, DAHOMEY. See Cotonou.

PORTO VECCHIO DI PIOMBINO, ITALY
 (42°56'00" N., 10°33'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,315
 Strait of Gibraltar, 897

Ports
 Genova, Italy, 116
 Marseille, France, 247
 Napoli, Italy, 227

PORTSMOUTH, ENGLAND
 (50°48'00" N., 1°06'40" W.) to:

Junction Points*
 Bishop Rock, England (via Needles Channel), 225
 Kiel Canal (east end), Germany, 515
 Skagens Odde, Denmark, 632
 Ushant, France, 227

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Aberdeen, Scotland, 514
 Amsterdam, Netherlands, 266
 Antwerpen, Belgium, 242
 Bergen, Norway, 695
 Bremerhaven, Germany, 446
 Dover, England, 105
 Dundee, Scotland, 497
 Dunkerque, France, 150
 Egersund, Norway, 582
 Emden, Germany, 389
 Esbjerg, Denmark, 475
 Hamburg, Germany, 504
 Hartlepool, England, 378
 Hull, England, 318
 Kristiansand, Norway, 593
 Leith, Scotland, 495
 London, England, 197
 Newcastle, England, 403
 Oostende, Belgium, 174
 Oslo, Norway, 745
 Rotterdam, Netherlands, 243
 Stavanger, Norway, 622
 Wilhelmshaven, Germany, 433
 Zeebrugge, Belgium, 179

PORTSMOUTH, NEW HAMPSHIRE, U.S.A.
 (43°04'40'' N., 70°44'30'' W.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 6,732
 Straits of Florida, 1,461
 Yucatan Channel (outside route), 1,612

Ports
 Angmagssalik, Greenland (direct), 2,052
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 2,066
 Argentia, Canada, 779
 Arkhangelsk, U.S.S.R., 3,992
 Belem, Brazil, 2,959
 Cartagena, Colombia, 2,053
 Castries, St. Lucia, 1,822
 Charlotte Amalie, Virgin Islands, 1,534
 Colon, Panama, 2,174
 Dakar, Senegal, 3,219
 Elizabeth Harbor, Bahamas, 1,252
 Freetown, Sierra Leone, 3,654
 Georgetown, British Guiana, 2,284
 Guantanamo, Cuba (Nantucket Light Vessel, via Crooked Island Passage and Windward Passage), 1,512
 Halifax, Canada, 359
 Hamilton, Bermuda, 723
 Ivigtut, Greenland, 1,709
 Kingston, Jamaica, 1,655

Port of Spain, Trinidad, 2,024
 Reykjavik, Iceland, 2,271
 St. John, Canada, 248
 San Juan, Puerto Rico, 1,507
 Sydney, Canada, 576

POZZUOLI, ITALY
 (40°49'30'' N., 14°07'00'' E.) to:

Junction Points*
 Port Said, U.A.R., 1,118
 Strait of Gibraltar, 995

Ports
 Civitavecchia, Italy, 147
 Messina, Sicily, 177
 Tunis, Tunisia, 308

PRAIA, BAHIA PRAIA, TERCEIRA, AZORES
 (38°43'45'' N., 27°03'10'' W.) to:

Junction Points*
 Bishop Rock, England, 1,128
 Strait of Gibraltar, 1,034
 Straits of Florida, 3,017

Ports
 Lisboa, Portugal, 850
 New York, New York, U.S.A., 2,173

PRAIA, SAO TIAGO, CAPE VERDE ISLANDS
 (14°54'15'' N., 23°30'30'' W.) to:

Ports
 Funchal, Madeira Island, 1,128

PRAIA DA VITORIA, TERCEIRA, AZORES. See Praia, Bahia Praia.

PREVEZA, GREECE
 (38°57'15'' N., 20°45'20'' E.) to:

Junction Points*
 Port Said, U.A.R., 806
 Strait of Gibraltar, 1,319

Ports
 Durres, Albania, 181
 Messina, Sicily, 274
 Piraievs, Greece (via Corinth Canal), 197

PRINCE RUPERT, CANADA
 (54°19'00'' N., 130°20'00'' W.) to:

Junction Points*
 Panama, Panama, 4,303

Punta Arenas, Chile, 7,247
 Singapore, 5,683

Ports
 Apra, Guam, 4,586
 Auckland, New Zealand, 6,209
 Callao, Peru, 5,047
 Dutch Harbor, Alaska, U.S.A., 1,274
 Hakodate, Japan (south of Aleutian Islands), 3,525
 Hakodate, Japan (alternate route, north of Aleutian Islands), 3,487
 Hong Kong, B.C.C. (south of Aleutian Islands), 5,323
 Hong Kong, B.C.C. (alternate route, north of Aleutian Islands), 5,286
 Honolulu, Hawaii, U.S.A., 2,393
 Juneau, Alaska, U.S.A., 322
 Los Angeles, California, U.S.A., 1,432
 Manila, Philippines (south of Aleutian Islands, and north of Luzon), 5,510
 Manila, Philippines (alternate route, north of Aleutian Islands), 5,493
 Nanaimo, Canada, 453
 New Westminster, Canada, 492
 Nome, Alaska, U.S.A., 1,846
 Pago Pago, American Samoa, 4,652
 Petropavlovsk, U.S.S.R. (via Unimak Pass), 2,504
 San Francisco, California, U.S.A., 1,090
 Seattle, Washington, U.S.A., 577
 Seward, Alaska, U.S.A., 734
 Sitka, Alaska, U.S.A., 285
 Sydney, Australia, 6,671
 Valparaiso, Chile, 6,199
 Vancouver, Canada, 477
 Victoria, Canada, 531
 Yokohama, Japan (south of Aleutian Islands), 3,827
 Yokohama, Japan (alternate route, north of Aleutian Islands), 3,810

PROGRESO, MEXICO
 (21°21'00'' N., 89°40'00'' W.) to:

Junction Points
 Panama, Panama, 1,069

Ports
 Baltimore, Maryland, U.S.A., 1,530
 Boston, Massachusetts, U.S.A., 1,838
 Colon, Panama, 1,026
 Habana, Cuba, 430
 New Orleans, Louisiana, U.S.A., 556
 New York, New York, U.S.A., 1,609
 Tampico, Mexico, 469
 Veracruz, Mexico, 401

*JUNCTION POINT.—See Preface for use of junction points.

PROVIDENCE, RHODE ISLAND, U.S.A.

(41°48'30" N., 71°24'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 2,994
 Bishop Rock, England (track B), 2,956
 Bishop Rock, England (track C), 2,883
 Fastnet, Ireland (track A), 2,890
 Fastnet, Ireland (track B), 2,851
 Fastnet, Ireland (track C), 2,769
 Inishtrahull, Ireland (track A), 3,016
 Inishtrahull, Ireland (track B), 2,970
 Inishtrahull, Ireland (track C), 2,867
 Pentland Firth, Scotland (track A), 3,230
 Pentland Firth, Scotland (track B), 3,174
 Pentland Firth, Scotland (track C), 3,047
 Strait of Gibraltar (track A), 3,138
 Strait of Gibraltar (track B), 3,128
 Strait of Gibraltar (track C), 3,112

Ports

Bordeaux, France (track A), 3,276
 Bordeaux, France (track B), 3,245
 Bordeaux, France (track C), 3,190

PROVIDENCE BAY, U.S.S.R. See Provideniya.**PROVIDENIYA, U.S.S.R.**

(64°22'00" N., 173°17'30" W.) to:

Ports

Ambarchik, U.S.S.R., 864
 Anadyrskiy Liman, U.S.S.R., 254
 Pevek, U.S.S.R., 719
 Tiksi, U.S.S.R., 1,500

PUERTO ARMUELLES, PANAMA

(8°16'15" N., 82°51'30" W.) to:

Junction Points*

Panama, Panama, 306

Ports

Corinto, Nicaragua, 409
 Los Angeles, California, U.S.A., 2,645
 San Francisco, California, U.S.A., 2,973

PUERTO BANES, CUBA. See Banes.**PUERTO BARRIOS, GUATEMALA**

(15°43'00" N., 88°37'00" W.) to:

Junction Points*

Panama, Panama, 823
 Yucatan Channel, 439

Ports

Baltimore, Maryland, U.S.A., 1,725
 Cartagena, Colombia, 901
 Colon, Panama, 780
 Galveston, Texas, U.S.A., 1,041
 Habana, Cuba, 608
 Kingston, Jamaica, 715
 Mobile, Alabama, U.S.A., 950
 New Orleans, Louisiana, U.S.A. (via South Pass), 955
 New York, New York, U.S.A., 1,804
 Norfolk, Virginia, U.S.A., 1,603
 Philadelphia, Pennsylvania, U.S.A., 1,774
 Santiago de Cuba, Cuba, 792
 Savannah, Georgia, U.S.A., 1,224
 Veracruz, Mexico, 985

PUERTO CABELLO, VENEZUELA

(10°29'15" N., 68°00'30" W.) to:

Junction Points*

Panama, Panama, 845
 Straits of Florida (via Windward Passage), 1,299
 Yucatan Channel, 1,203

Ports

Alvaro Obregon, Mexico, 1,745
 Baltimore, Maryland, U.S.A., 1,818
 Belize, British Honduras, 1,289
 Boston, Massachusetts, U.S.A. (via Mona Passage), 1,976
 Campeche, Mexico, 1,595
 Cape Haitien, Haiti, 752
 Castries, St. Lucia, 465
 Charlotte Amalie, Virgin Islands, 506
 Cienfuegos, Cuba, 1,015
 Colon, Panama, 802
 Galveston, Texas, U.S.A., 1,899
 Habana, Cuba (via Old Bahama Channel and Windward Passage), 1,260
 Key West, Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 1,248
 Kingston, Jamaica, 697
 Paramaribo, Surinam, 887
 Philadelphia, Pennsylvania, U.S.A. (via Mona Passage), 1,845
 Pointe a Pitre, Guadeloupe, 520
 Port au Prince, Haiti, 769
 Port of Spain, Trinidad, 395
 Santo Domingo, Dominican Republic, 492
 Tuxpan, Mexico, 1,883
 Veracruz, Mexico, 1,848
 Willemstad, Curacao, 116

PUERTO CABEZAS, NICARAGUA

(14°01'00" N., 83°22'30" W.) to:

Junction Points*

Panama, Panama, 390

Ports

Kingston, Jamaica, 451
 Le Ceiba, Honduras, 316
 Oranjestad, St. Eustatius, 1,195

PUERTO CAYO MOA, CUBA

(20°40'00" N., 74°54'00" W.) to:

Junction Points*

Panama, Panama, 853
 Straits of Florida, 510

Ports

Kingston, Jamaica, 301
 Nuevitas, Cuba, 154
 San Juan, Puerto Rico, 533

PUERTO COLOMBIA, COLOMBIA

(11°00'00" N., 74°58'00" W.) to:

Junction Points*

Panama, Panama, 358

Ports

Habana, Cuba (via Yucatan Channel), 1,068
 Kingston, Jamaica, 438
 La Guaira, Venezuela, 539
 Miragoane, Haiti, 549
 Philadelphia, Pennsylvania, U.S.A., 1,774
 Port au Prince, Haiti, 586
 Santo Domingo, Dominican Republic, 542

PUERTO CONCEPCION, ARGENTINA

(44°33'09" S., 65°22'45" W.) to:

Junction Points*

Panama, Panama, 6,067
 Punta Arenas, Chile, 624

Ports

Buenos Aires, Argentina, 806
 Stanley, Falkland Islands, 538

PUERTO CORTES, HONDURAS

(15°50'00" N., 87°57'20" W.) to:

Junction Points*

Panama, Panama, 776
 Yucatan Channel, 399

Ports

Baltimore, Maryland, U.S.A., 1,690
 Barranquilla, Colombia, 873
 Bluefields, Nicaragua, 519

*JUNCTION POINT.—See Preface for use of junction points.

Buenos Aires, Argentina, 5,909
 Cartagena, Colombia, 854
 Castries, St. Lucia, 1,578
 Charlotte Amalie, Virgin Islands, 1,343
 Colon, Panama, 733
 Dakar, Senegal, 4,077
 Galveston, Texas, U.S.A., 1,001
 Georgetown, British Guiana, 1,933
 Guantanamo, Cuba, 770
 Kingston, Jamaica, 671
 La Guaira, Venezuela, 1,294
 Limon, Costa Rica, 623
 Mobile, Alabama, U.S.A., 915
 New Orleans, Louisiana, U.S.A. (via South Pass), 916
 New York, New York, U.S.A., 1,764
 Norfolk, Virginia, U.S.A., 1,563
 Philadelphia, Pennsylvania, U.S.A., 1,739
 Port of Spain, Trinidad, 1,599
 Recife, Brazil, 3,737
 Rio de Janeiro, Brazil, 4,813
 St. Johns, Antigua, 1,511
 San Juan, Puerto Rico, 1,284
 Savannah, Georgia, U.S.A., 1,189
 Stanley, Falkland Islands, 6,585
 Swan Island, 254
 Tampico, Mexico, 993
 Veracruz, Mexico, 948

PUERTO CUMAREBO, VENEZUELA
 (11°31'20" N., 69°20'00" W.) to:

Junction Points*
 Panama, Panama, 740
 Yucatan Channel, 1,103

Ports
 Barranquilla, Colombia, 386
 La Guaira, Venezuela, 168

PUERTO DE LA LUZ. See Las Palmas de Gran Canaria.

PUERTO DE PASAJES, SPAIN
 (43°19'30" N., 1°55'00" W.) to:

Junction Points*
 Strait of Gibraltar, 894
 Ushant, France, 340

Ports
 Bordeaux, France, 178
 El Ferrol del Caudillo, Spain, 300
 Horta, Azores, 1,260
 Porto de Leixoes, Portugal, 473

PUERTO DE HIERRO, VENEZUELA
 (10°37'00" N., 62°05'30" W.) to:

Junction Points*
 Panama, Panama, 1,192
 Straits of Florida, 2,086

Ports
 Barranquilla, Colombia, 838
 Belem, Brazil, 1,215

PUERTO DESEADO, ARGENTINA
 (47°45'20" S., 65°55'05" W.) to:

Junction Points*
 Panama, Panama, 6,222
 Punta Arenas, Chile, 440

Ports
 Buenos Aires, Argentina, 965
 Stanley, Falkland Islands, 409

PUERTO LA CRUZ, VENEZUELA
 (10°14'50" N., 64°35'57" W.) to:

Junction Points*
 Panama, Panama, 1,016
 Yucatan Channel, 1,381

Ports
 La Guaira, Venezuela, 145
 Philadelphia, Pennsylvania, U.S.A., 1,900
 Port of Spain, Trinidad, 214

PUERTO LIMON, COSTA RICA.
 See Limon.

PUERTO MADRYN, ARGENTINA
 (42°45'45" S., 65°01'35" W.) to:

Junction Points*
 Panama, Panama, 6,012
 Punta Arenas, Chile, 760

Ports
 Buenos Aires, Argentina, 748
 Stanley, Falkland Islands, 633

PUERTO MAGDALENA, MEXICO.
 See Bahia Magdalena.

PUERTO MANATI, CUBA
 (21°21'40" N., 76°49'20" W.) to:

Junction Points*
 Panama, Panama, 959
 Straits of Florida, 397

Ports
 Habana, Cuba, 353
 New York, New York, U.S.A., 1,244
 San Juan, Puerto Rico, 639

PUERTO MASACHAPA, NICARAGUA
 (11°44'00" N., 86°31'30" W.) to:

Junction Points*
 Panama, Panama, 619

Ports
 Acapulco, Mexico, 850
 Callao, Peru, 1,583

PUERTO MEXICO, MEXICO
 (18°08'00" N., 94°24'45" W.) to:

Junction Points*
 Panama, Panama, 1,420
 Straits of Florida, 757
 Yucatan Channel, 625

Ports
 Cartagena, Colombia, 1,484
 Colon, Panama, 1,396
 Galveston, Texas, U.S.A., 680
 Habana, Cuba, 840
 Mobile, Alabama, U.S., 834
 New Orleans, Louisiana, U.S.A., 801
 Norfolk, Virginia, U.S.A., 1,736
 Pensacola, Florida, U.S.A., 836
 Port Arthur, Texas, U.S.A., 708
 Port of Spain, Trinidad, 2,137
 Tampico, Mexico, 320
 Veracruz, Mexico, 127

PUERTO MIRANDA, VENEZUELA
 (10°45'30" N., 71°33'15" W.)

Subtract 8½ miles from Maracaibo distances.

PUERTO MONTT, CHILE
 (41°29'00" S., 72°57'00" W.) to:

Junction Points*
 Panama, Panama, 3,177
 Punta Arenas, Chile, 992

Ports
 Islas Juan Fernandez, 616
 Mollendo, Peru, 1,578
 Valparaiso, Chile, 623

PUERTO ORDAZ, VENEZUELA
 (8°21'00" N., 62°43'00" W.)

Add 4 miles to San Felix distances.

PUERTO PADRE, CUBA
 (21°13'00" N., 76°34'00" W.) to:

Junction Points*
 Panama, Panama, 948
 Straits of Florida, 409

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Maracaibo, Venezuela, 834
Matanzas, Cuba, 330
San Juan, Puerto Rico, 625

PUERTO PLATA, DOMINICAN REPUBLIC. See Port Plata.

PUERTO SIBONEY, CUBA
(19°57'00" N., 75°42'00" W.) to:

Junction Points*
Straits of Florida, 659
Yucatan Channel, 545

Ports
Habana, Cuba, 729
Montego Bay, Jamaica, 159
Pina, Panama, 697

PUERTO SOMOZA, NICARAGUA
(12°09'00" N., 86°49'30" W.) to:

Junction Points*
Panama, Panama, 649

Ports
Acapulco, Mexico, 825
Callao, Peru, 1,608

PUERTO SUCRE, VENEZUELA
(10°27'45" N., 64°11'43" W.) to:

Junction Points*
Panama, Panama, 1,035
Yucatan Channel, 1,399

Ports
La Guaira, Venezuela, 205
Philadelphia, Pennsylvania, U.S.A., 1,907
Port of Spain, Trinidad, 200

PUERTO TANAMO, CUBA
(20°42'00" N., 75°20'00" W.) to:

Junction Points*
Panama, Panama, 869
Straits of Florida, 489

Ports
Habana, Cuba, 444
Kingston, Jamaica, 318
San Juan, Puerto Rico, 549

PUERTO VITA, CUBA
(21°04'52" N., 75°57'07" W.) to:

Junction Points*
Panama, Panama, 915
Straits of Florida, 444

Ports
Habana, Cuba, 400
Kingston, Jamaica, 364
San Juan, Puerto Rico, 592

PULA, YUGOSLAVIA
(44°52'08" N., 13°50'07" E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,244
Port Said, U.A.R. (south of Greece), 1,256
Strait of Gibraltar, 1,628

Ports
Catania, Sicily, 594
Constanta, Rumania (via Corinth Canal), 1,206
Constanta, Rumania (south of Greece), 1,305
Iskenderun, Turkey (via Corinth Canal), 1,301
Iskenderun, Turkey (south of Greece), 1,341
Istanbul, Turkey, 1,124
Jaffa, Israel (via Corinth Canal), 1,306
Jaffa, Israel (south of Greece), 1,331
Kerch, U.S.S.R. (via Corinth Canal), 1,444
Kerch, U.S.S.R. (south of Greece), 1,543
Larnaca, Cyprus (via Corinth Canal), 1,212
Larnaca, Cyprus (south of Greece), 1,245
Mersin, Turkey (via Corinth Canal), 1,244
Mersin, Turkey (south of Greece), 1,260
Patrai, Greece, 555
Rostov-na-Donu, U.S.S.R. (via Corinth Canal), 1,646
Rostov-na-Donu, U.S.S.R. (south of Greece), 1,745
Sete, France, 1,216

PULUPANDAN, PHILIPPINES
(10°31'00" N., 122°47'30" E.) to:

Junction Points*
Singapore, 1,504
Torres Strait, Australia, 1,962

Ports
Cebu, Philippines, 225
Manila, Philippines, 363
Zamboanga, Philippines, 237

PUNTA ARENAS, CHILE*
(53°10'00" S., 70°54'00" W.) to:

Junction Points*
Bishop Rock, England, 7,019
Cape of Good Hope, Republic of South Africa, 4,262
Inishtrahull, Ireland, 7,315
Montreal, Canada (via Strait of Canso), 7,513
Panama, Panama, 3,932
Pentland Firth, Scotland, 7,563
Strait of Gibraltar, 6,352
Straits of Florida, 6,783
Torres Strait, Australia (via Lat. 30° S. and Raine Island entrance), 8,348
Ushant, France, 6,986
Wilson Promontory, Australia (via Lat. 30° S. and Cook Strait), 7,460
Wilson Promontory, Australia (via Lat. 60° S.), 5,305
Wilson Promontory, Australia (via Foveaux Strait and Lat. 49° S.), 5,820
Yucatan Channel, 6,794

Ports
Acapulco, Mexico, 4,582
Angra dos Reis, Brazil, 2,212
Antofagasta, Chile, 1,996
Apia, Samoa, 5,207
Apra, Guam, 8,071
Arica, Chile, 2,301
Auckland, New Zealand (via Lat. 30° S.), 6,132
Auckland, New Zealand (via Lat. 49° S.), 4,814
Avarua, Cook Islands, 4,429
Bahia Blanca, Argentina, 1,004
Baltimore, Maryland, U.S.A., 7,002
Belem, Brazil, 4,363
Bordeaux, France, 7,074
Boston, Massachusetts, U.S.A., 6,910
Brisbane, Australia (via Lat. 30° S.), 7,369
Brisbane, Australia (via Lat. 49° S.), 6,063
Buenos Aires, Argentina, 1,394
Cabedelo, Cuba, 3,327
Caldera, Chile, 1,795
Caleta Olivia, Argentina, 570
Callao, Peru, 2,671
Cape Town, Republic of South Africa, 4,279
Castries, St. Lucia, 5,451
Charleston, South Carolina, U.S.A., 6,868
Charlotte Amalie, Virgin Islands, 5,714
Charlottetown, Canada, 6,907
Chimbote, Peru, 2,843
Colon, Panama, 6,451
Comodoro Rivadavia, Argentina, 585

*JUNCTION POINT.—See Preface for use of junction points.

Coquimbo, Chile, 1,623
 Corinto, Nicaragua, 4,180
 Corral, Chile, 1,020
 Dakar, Senegal, 4,928
 Dutch Harbor, Alaska, U.S.A., 8,063
 Esmeraldas, Ecuador, 3,486
 Fortaleza, Brazil, 3,654
 Freetown, Sierra Leone, 4,731
 Funchal, Madeira Island, 5,894
 Georgetown, British Guiana, 5,030
 Guayaquil, Ecuador, 3,307
 Guaymas, Mexico, 5,401
 Habana, Cuba (via Old Bahama Channel and east of South America), 6,742
 Hakodate, Japan (via Lat. 30° S.), 9,672
 Halifax, Canada, 6,799
 Hamilton, Bermuda, 6,273
 Honolulu, Hawaii, U.S.A. (via Lat. 30° S.), 6,414
 Hsia-men, China, 10,537
 Iquique, Chile, 2,201
 Jacksonville, Florida, U.S.A., 6,879
 Jaluit, Marshall Islands, 6,815
 Kobe, Japan (via Lat. 30° S.), 9,872
 La Libertad, Ecuador, 3,258
 Levuka, Fiji Islands, 5,342
 Lisboa, Portugal, 6,398
 Los Angeles, California, U.S.A., 5,871
 Lota, Chile, 1,191
 Maceio, Brazil, 3,137
 Maldonado, Uruguay, 1,321
 Mar del Plata, Argentina, 1,112
 Matarani, Peru, 2,380
 Midway Island, 7,382
 Mollendo, Peru, 2,374
 Monterey, California, U.S.A., 6,113
 Montevideo, Uruguay (via west of English Bank), 1,300
 Nagasaki, Japan (via Lat. 30° S.), 10,126
 Natal, Brazil, 3,400
 New York, New York, U.S.A., 6,934
 Norfolk, Virginia, U.S.A., 6,880
 Noumea, New Caledonia (composite sailing with Lat. 49° S. the limiting latitude), 5,745
 Noumea, New Caledonia (via Great Circle), 5,527
 Omura, Bonion Islands, 8,765
 Pago Pago, American Samoa, 5,181
 Papeete, Society Islands, 4,233
 Paranagua, Brazil, 2,001
 Philadelphia, Pennsylvania, U.S.A., 6,978
 Pisco, Peru, 2,578
 Ponape, Caroline Islands, 7,260
 Port Gallegos, Argentina, 202
 Port of Spain, Trinidad, 5,350

Portland, Maine, U.S.A., 6,939
 Portland, Oregon, U.S.A., 6,813
 Porto Alegre, Brazil, 1,686
 Porto Concepcion, Argentina, 624
 Prince Rupert, Canada, 7,247
 Puerto Descado, Argentina, 440
 Puerto Madryn, Argentina, 760
 Puerto Montt, Chile, 992
 Puntarenas, Costa Rica, 4,010
 Quequen, Argentina, 1,053
 Rabaul, New Britain (via Lat. 30° S.), 7,980
 Recife, Brazil, 3,252
 Rio de Janeiro, Brazil, 2,238
 Rio Grande, Argentina, 220
 St. John's Canada, 6,735
 Salina Cruz, Mexico, 4,478
 Salvador, Brazil, 2,920
 San Antonio, Chile, 1,410
 San Blas, Mexico, 4,961
 San Diego, California, U.S.A., 5,801
 San Francisco, California, U.S.A., 6,188
 San Jose, Guatemala, 4,296
 San Juan, Peru, 1,660
 Santa Barbara, California, U.S.A., 5,938
 Santa Cruz de Tenerife, Canary Islands, 5,690
 Savannah, Georgia, U.S.A., 6,898
 Seattle, Washington, U.S.A., 6,964
 Seward, Alaska, U.S.A., 7,859
 Shang-hai, China (via Lat. 30° S.), 10,465
 Shimonoseki, Japan (via Lat. 30° S.), 10,038
 Sitka, Alaska, U.S.A., 7,455
 Stanley, Falkland Islands, 558
 Suva, Fiji Islands, 5,444
 Sydney, Australia (via Lat. 30° S. and north of New Zealand), 7,301
 Sydney, Australia (via Lat. 60° S.), 5,398
 Ta-ku, China (north of Marshall Islands), 10,843
 Talcahuano, Chile, 1,269
 Ta-lien, China, 10,687
 Ta-lien, China (north of Marshall Islands), 10,683
 Tocopilla, Chile, 2,177
 Valparaiso, Chile, 1,432
 Vancouver, Canada, 6,978
 Wellington, New Zealand (via Lat. 50° S.), 4,634
 Wellington, New Zealand (via Lat. 30° S.), 6,141
 Wilmington, North Carolina, U.S.A., 6,853
 Yokohama, Japan (via Lat. 30° S.), 9,642

PUNTA CARDON, VENEZUELA
 (11°37'30" N., 70°14'30" W.) to:

Junction Points*

Panama, Panama, 674
 Yucatan Channel, 1,055

Ports

Cartagena, Colombia, 397
 Kingston, Jamaica, 530
 Port of Spain, Trinidad, 574

PUNTA DE PIEDRAS, VENEZUELA
 (11°42'12" N., 70°13'30" W.)

Add 2 miles to Amuay distances.

PUNTARENAS, COSTA RICA
 (9°58'00" N., 84°50'00" W.) to:

Junction Points*

Panama, Panama, 471
 Punta Arenas, Chile, 4,010

Ports

Acapulco, Mexico, 1,011
 Amapala, Honduras, 329
 Antofagasta, Chile, 2,215
 Arica, Chile, 1,996
 Callao, Peru, 1,421
 Coquimbo, Chile, 2,526
 Corinto, Nicaragua, 262
 Esmeraldas, Ecuador, 614
 Guayaquil, Ecuador, 878
 Guaymas, Mexico, 1,956
 Iquique, Chile, 2,062
 La Libertad, El Salvador, 383
 La Libertad, Mexico, 2,120
 Los Angeles, California, U.S.A., 2,499
 Lota, Chile, 2,899
 Mollendo, Peru, 1,871
 Monterey, California, U.S.A., 2,751
 Pisco, Peru, 1,533
 San Blas, Mexico, 1,500
 San Diego, California, U.S.A., 2,429
 San Francisco, California, U.S.A., 2,831
 San Jose, Guatemala, 465
 San Juan del Sur, Nicaragua, 171
 Santa Barbara, California, U.S.A., 2,566
 Talcahuano, Chile, 2,879
 Valparaiso, Chile, 2,690

PUSAN, KOREA

(35°06'00" N., 129°03'00" E.) to:

Junction Points*

Singapore, 2,502
 Sunda Strait, Indonesia, 2,855

*JUNCTION POINT.—See Preface for use of junction points.

Wetar Passage, Indonesia (via Molucca Passage and Selat Manipa), 2,632

Ports

Aleksandrovsk, U.S.S.R., 1,118
 Changjon, Korea, 268
 Chinnampo, Korea (via Maenggol Sudo), 496
 Chin-huang-tao, China (via Maenggol Sudo), 650
 Chin-tao, China, 497
 Chongjin, Korea, 417
 Darwin, Australia (via Molucca Passage), 2,937
 Djakarta, Indonesia, 2,836
 Hakodate, Japan, 686
 Higashi-Iwase, Japan, 492
 Hong Kong, B.C.C., 1,144
 Honolulu, Hawaii, U.S.A., 3,973
 Hsia-men, China, 885
 Hua-lien Chiang, Taiwan, 782
 Hungnam, Korea, 328
 Inchon, Korea (via Maenggol Sudo), 402
 Kimchaek, Korea, 351
 Kobe, Japan, 361
 Krung Thep, Thailand (outer bar), 2,533
 Kunsan, Japan, 376
 Kushiro, Japan, 876
 Lo-hsing-ta Mao-ti, China, 762
 Los Angeles, California, U.S.A., 5,229
 Lu-shun, China (via Maenggol Sudo), 549
 Maizuru, Japan, 333
 Manila, Philippines, 1,402
 Moji, Japan, 123
 Mokpo, Korea, 225
 Nagasaki, Japan, 163
 Naha, Ryukyu Islands, 550
 Nakhodka, U.S.S.R., 508
 Nanao, Japan, 476
 Niigata, Japan, 516
 Pago Pago, American Samoa (via Bungo Suido), 4,561
 Petropavlovsk, U.S.S.R., 1,731
 Rumoi, Japan, 793
 Sai Gon, Vietnam, 1,999
 Sakata, Japan, 577
 San Francisco, California, U.S.A., 4,914
 Shang-hai, China (north of Cheju Do, and via South Channel), 491
 Shan-tou, China, 994
 Sosura, Korea, 448
 Tai-tung Chiang, Taiwan, 860
 Ta-ku, China (via Maenggol Sudo), 702
 Ta-lien, China (via Maenggol Sudo), 543
 Tongyong, Korea, 63

Ube, Japan, 143
 Unggi, Korea, 452
 Vladivostok, U.S.S.R., 514
 Wakamatsu, Japan, 120
 Wei-hai-wei, China, 474
 Wonsan, Korea, 308
 Yen-tai, China (via Maenggol Sudo), 508
 Yokohama, Japan, 665
 Yosu, Korea, 97

QABIS, TUNISIA

(33°53'54" N., 10°07'30" E.) to:

Junction Points*

Port Said, U.A.R., 1,149
 Strait of Gibraltar, 1,073

Ports

Tarabulus, Libya, 174
 Tunis, Tunisia, 302
 Valletta, Malta, 232

QUEENSTOWN, IRELAND. See Cobh.

QUELIMANE, MOZAMBIQUE

(17°52'52" S., 36°53'06" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 1,569
 Port Said, U.A.R., 3,839

Ports

Beira, Mozambique, 123
 East London, Republic of South Africa, 1,062
 Inhambane, Mozambique, 377
 Mocambique, Mozambique, 327

QUEPOS, COSTA RICA

(9°25'00" N., 84°10'00" W.) to:

Junction Points*

Panama, Panama, 415

Ports

Acapulco, Mexico, 1,043
 Callao, Peru, 1,387

QUEQUEN, ARGENTINA

(38°35'00" S., 58°41'30" W.) to:

Junction Points*

Panama, Panama, 5,202
 Punta Arenas, Chile, 1,053

Ports

Buenos Aires, Argentina, 350
 Santos, Brazil, 1,437

QUI NHON, VIETNAM

(13°45'00" N., 109°15'00" E.) to:

Junction Points*

Singapore, 856
 Sunda Strait, Indonesia, 1,241

Ports

Haiphong, Vietnam, 469
 Hong Kong, B.C.C., 592
 Sai Gon, Vietnam, 361

QUIBERON, FRANCE

(47°28'30" N., 3°07'15" W.) to:

Junction Points*

Bishop Rock, England, 253
 Strait of Gibraltar, 932
 Ushant, France, 133

Ports

Bilbao, Spain, 249
 Horta, Azores, 1,290

QUONSET POINT, RHODE ISLAND, U.S.A.

(41°35'00" N., 71°24'00" W.)

Subtract 13 miles from Providence distances.

QUTDLIGSSAT, GREENLAND

(70°05'00" N., 53°00'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 2,106
 Strait of Gibraltar, 2,953

Ports

Churchill, Canada, 1,666
 Reykjavik, Iceland, 1,552
 St. John's, Canada, 1,476

RABAT, MOROCCO

(34°02'30" N., 6°50'30" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,036
 Ushant, France, 954

Ports

Dakar, Senegal, 1,412
 Sidi Ifni, Ifni, 357
 Tangier, Morocco, 125

*JUNCTION POINT.—See Preface for use of junction points.

RABAU, NEW BRITAIN

(4°12'30" S., 152°12'00" E.) to:

Junction Points*

Panama, Panama, 7,807

Punta Arenas, Chile (via Lat. 49° S.), 7,036

Ports

Apia, Samoa, 2,232

Apra, Guam, 1,187

Auckland, New Zealand, 2,345

Avarua, Cook Islands, 2,993

Brisbane, Australia, 1,434

Callao, Peru, 7,713

Ching-tao, China, 3,043

Hai-kou, Hai-nan To, China, 2,943

Hakodate, Japan, 2,894

Hong Kong, B.C.C., 2,764

Honolulu, Hawaii, U.S.A., 3,355

Hsia-men, China, 2,659

Kuang-chou, China, 2,856

Lae, New Guinea, 448

Levuka, Fiji Islands, 1,836

Mackay, Australia, 1,871

Manila, Philippines, 2,281

Melbourne, Australia, 2,408

Midway Island, 2,688

Nagasaki, Japan, 2,612

Noumea, New Caledonia, 1,383

Omura, Bonin Islands, 2,007

Papeete, Society Islands, 3,527

Petrovsk, U.S.S.R., 3,555

Ponape, Caroline Islands, 853

Rotoava, Tuamotu Archipelago, 3,743

San Francisco, California, U.S.A., 5,396

Seattle, Washington, U.S.A., 5,509

Selwyn Bay, Solomon Islands, 694

Sorong, New Guinea, 1,304

Sydney, Australia, 1,844

Ta-ku, China, 3,294

Talomako, New Hebrides, 1,104

Valparaiso, Chile, 7,461

Walleroo, Australia, 2,911

Whyalla, Australia, 2,957

Yap Islands, Caroline Islands, 1,196

Yin-hsien, China (via Shih-peng Chiang), 2,746

Yokohama, Japan, 2,526

RABOCHEOSTROVSK, U.S.S.R.

(64°59'00" N., 34°47'00" E.)

Add 48 miles to Arkhangelsk distances.

RANDERS, DENMARK

(56°27'48" N., 10°03'48" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 188

Skagens Odde, Denmark, 96

Ports

Gdynia, Poland, 403

Stockholm, Sweden, 604

Swinoujscie, Poland, 266

RANGOON, BURMA

(16°46'00" N., 96°10'00" E.) to:

Junction Points*

Cape Leeuwin, Australia (west of Sumatra), 3,359

Cape of Good Hope, Republic of South Africa (east of Reunion Island, May–September), 5,482

Cape of Good Hope, Republic of South Africa (west of Reunion Island and east of Madagascar, November–March), 5,498

Cape of Good Hope, Republic of South Africa (west of Madagascar, April–October), 5,604

Port Said, U.A.R. (south of Socotra, October–April), 4,705

Port Said, U.A.R. (south of Socotra, May–September), 4,826

Port Said, U.A.R. (alternate route, May–September), 4,818

Port Said, U.A.R. (south of Socotra, May–September), 4,887

Singapore, 1,109

Ports

Aden, Aden Protectorate (south of Socotra, October–April), 3,318

Aden, Aden Protectorate (south of Socotra, May–September), 3,439

Aden, Aden Protectorate (north of Socotra, alternate route, May–September), 3,428

Aden, Aden Protectorate (south of Socotra, low power, May–September), 3,500

Al Bahrayn, Bahrain, 3,329

Al Basrah, Iraq, 3,603

Al Kuwayt, Kuwait, 3,513

Belawan, Indonesia, 803

Bombay, India, 2,139

Bushehr, Iran, 3,425

Calcutta, India, 787

Colombo, Ceylon, 1,268

Fremantle, Australia (west of Sumatra), 3,248

Karachi, Pakistan, 2,561

Madras, India, 1,003

Malacca, Malaysia, 986

Masqat, Mascat and Oman, 2,840

Massaua, Ethiopia (October–April), 3,705

Massaua, Ethiopia (alternate route, May–September), 3,818

Massaua, Ethiopia (low power, May–September), 3,887

Massau, Ethiopia (May–September), 3,827

Mombasa, Kenya, 3,714

Penang, Malaysia, 757

Sabang, Indonesia, 664

Zanzibar, Zanzibar, 3,787

RAOUL ISLAND, KERMADEC ISLANDS

(29°16'00" S., 177°57'00" W.) to:

Junction Points*

Panama, Panama, 6,125

Ports

Apia, Samoa, 1,008

Apra, Guam, 3,369

Auckland, New Zealand, 597

Brisbane, Australia (via Howe Channel and Main Channel), 1,566

Honolulu, Hawaii, U.S.A., 3,246

Noumea, New Caledonia, 957

Papeete, Society Islands, 1,706

Suva, Fiji Islands, 701

Sydney, Australia, 1,600

RAPID BAY, AUSTRALIA

(35°31'30" S., 138°11'30" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,131

Sunda Strait, Indonesia, 2,946

Ports

Albany, Australia, 990

Hobart, Tasmania, 719

Melbourne, Australia, 458

RA'S AL HAFJI, NEUTRAL ZONE, PERSIAN GULF

(28°24'00" N., 48°33'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 5,414

Cape of Good Hope, Republic of South Africa, 5,078

Port Said, U.A.R., 3,260

Singapore, 3,799

Ports

Aden, Aden Protectorate, 1,871

Bombay, India, 1,491

RA'S AS SIDR, UNITED ARAB REPUBLIC

(29°34'36" N., 32°42'00" E.) to:

*JUNCTION POINT.—See Preface for use of junction points.

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,189
Port Said, U.A.R., 112
Singapore, 4,902

Ports
Aden, Aden Protectorate, 1,282

RA'S AT TANNURAH, SAUDI ARABIA
(26°39'00" N., 50°10'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 5,316
Cape of Good Hope, Republic of South Africa, 4,980
Port Said, U.A.R., 3,162
Singapore, 3,701

Ports
Al Basrah, Iraq, 295

RA'S GHARIB, UNITED ARAB REPUBLIC
(28°20'30" N., 33°07'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,114
Port Said, U.A.R., 187
Singapore, 4,827

Ports
Aden, Aden Protectorate, 1,207

RAS SUDR, U.A.R. See Ra's As Sidr.

RASHIN, KOREA. See Najin.

RAUMA, FINLAND
(61°07'30" N., 21°26'15" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 678

Ports
Peenemunde, Germany, 555
Stockholm, Sweden, 230
Turku, Finland, 98
Vaasa, Finland, 160

RAUMO, FINLAND. See Rauma.

RECIFE, BRAZIL
(8°03'00" S., 34°52'00" W.) to:

Junction Points*

Bishop Rock, England, 3,775
Cape of Good Hope, Republic of South Africa, 3,324

Inishtrahull, Ireland, 4,071
Montreal, Canada (via Cabot Strait), 4,283
Pentland Firth, Scotland, 4,319
Punta Arenas, Chile, 3,252
Strait of Gibraltar, 3,116
Straits of Florida (via Mona Passage), 3,540
Ushant, France, 3,743

Ports

Baltimore, Maryland, U.S.A., 3,772
Belem, Brazil, 1,084
Bordeaux, France, 3,823
Boston, Massachusetts, U.S.A., 3,669
Bridgetown, Barbados, 2,054
Brunswick, Georgia, U.S.A., 3,672
Buenos Aires, Argentina, 2,181
Cadiz, Spain, 3,125
Cape Town, Republic of South Africa, 3,318
Castries, St. Lucia, 2,151
Charleston, South Carolina, U.S.A., 3,624
Charlotte Amalie, Virgin Islands, 2,471
Charlottetown, Canada, 3,658
Clarence Bay, Ascension Island, 1,226
Colon, Panama, 3,212
Dakar, Senegal, 1,717
Fernando de Noreña, 300
Fortaleza, Brazil, 425
Freetown, Sierra Leone, 1,632
Georgetown, British Guiana, 1,781
Guiria, Venezuela, 2,208
Habana, Cuba, 3,499
Halifax, Canada, 3,558
Hamilton, Bermuda, 3,038
Jacksonville, Florida, U.S.A., 3,636
Key West, Florida, U.S.A., 3,488
Las Palmas de Gran Canaria, Canary Islands, 2,453

Lisboa, Portugal, 3,156
Miami, Florida, U.S.A., 3,456
Montevideo, Uruguay, 2,067
New York, New York, U.S.A., 3,698
Norfolk, Virginia, U.S.A., 3,651
Philadelphia, Pennsylvania, U.S.A., 3,745
Ponta Delgada, Azores, 2,803
Portland, Maine, U.S.A., 3,700
Puerto Cortes, Honduras, 3,737
St. John's, Canada, 3,491
Salvador, Brazil, 399
San Juan, Puerto Rico (outside all islands), 2,609
Savannah, Georgia, U.S.A., 3,681
Sydney, Canada, 3,553
Vigo, Spain, 3,346
Washington, D.C., U.S.A., 3,787

REFSE, FINLAND. See Reposaaari.

REGGIO DI CALABRIA, ITALY.
See Porto di Reggio Calabria.

REGIA DOGANA, SARDINIA. See Olbia.

REKVEDBUKTA. See Jan Mayen.

REPOSAARI, FINLAND
(61°36'30" N., 21°28'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 654
Skagens Odde, Denmark, 715

Ports
Helsinki, Finland, 331
Riga, Latvia, 394
Stockholm, Sweden, 192

RETHIMNON, CRETE
(35°22'30" N., 24°28'00" E.) to:

Junction Points*

Port Said, U.A.R., 489
Strait of Gibraltar, 1,485

Ports
Izmir, Turkey, 277
Messina, Sicily, 479
Piraeus, Greece, 151

REVEL, ESTONIA. See Tallinn.

REYD URKT, SAKHALIN, U.S.S.R.
(53°34'00" N., 143°05'00" E.) to:

Ports

Nagayevo, U.S.S.R., 441
Nemuro, Japan, 631
Nikolayevsk, U.S.S.R. (north of Sakhalin), 209

REYKJAVIK, ICELAND
(64°09'00" N., 21°56'00" W.) to:

Junction Points*

Inishtrahull, Ireland, 729
Montreal, Canada (via Strait of Belle Isle), 2,130
Pentland Firth, Scotland, 687
Strait of Gibraltar, 1,905
Straits of Florida, 3,487

Ports
Alesund, Norway, 848
Angmagssalik, Greenland, 418
Argentina, Canada, 1,584

*JUNCTION POINT.—See Preface for use of junction points.

Arkhangelsk, U.S.S.R. (north of Iceland), 1,874
 Arkhangelsk, U.S.S.R. (south of Iceland), 1,901
 Berlevag, Norway, 1,200
 Bergen, Norway, 872
 Bjornoya Island (north of Iceland), 1,152
 Bjornoya Island, 1,234
 Boston, Massachusetts, U.S.A., 2,293
 Brest, France, 1,193
 Camp Lloyd, Greenland, 1,274
 Christianshaab, Greenland, 1,278
 Churchill, Canada (via 75 miles off Kap Farvel), 2,290
 Colon, Panama, 4,098
 Egedesminde, Greenland, 1,371
 Faeringehavn, Greenland, 1,043
 Frederiksdal, Greenland, 714
 Glasgow, Scotland, 860
 Godhavn, Greenland (direct), 1,396
 Godhavn, Greenland (via 75 miles off Kap Farvel), 1,483
 Godthaab, Greenland, 1,076
 Goose Bay, Canada, 1,332
 Gronne Dal, Greenland, 960
 Guantanamo, Cuba, 3,434
 Halifax, Canada, 1,941
 Holsteinsborg, Greenland, 1,248
 Iokanga, U.S.S.R., 1,646
 Ivigtut, Greenland (direct), 887
 Ivigtut, Greenland (via 75 miles off Kap Farvel), 980
 Jakobshavn, Greenland, 1,418
 Jan Mayen, 617
 Julianehaab, Greenland (direct), 795
 Julianehaab, Greenland (via 75 miles off Kap Farvel), 892
 Kirkwall, Orkney Islands, 700
 Longyearbyen, Svalbard (north of Iceland), 1,160
 Longyearbyen, Svalbard (south of Iceland), 1,310
 Molde, Norway, 875
 Mosjoen, Norway, 1,023
 Murmansk, U.S.S.R. (north of Iceland), 1,501
 Murmansk, U.S.S.R. (south of Iceland), 1,529
 Namsos, Norway, 1,018
 Nanortalik, Greenland, 737
 Narsarssuak, Greenland, 830
 New York, New York, U.S.A., 2,495
 Norfolk, Virginia, U.S.A., 2,677
 Oslo, Norway, 1,173
 Pechenga, U.S.S.R., 1,460
 Philadelphia, Pennsylvania, U.S.A., 2,648
 Portsmouth, New Hampshire, U.S.A., 2,271
 Qutuligssat, Greenland, 1,552

Ritenbenk, Greenland, 1,581
 St. John's, Canada, 1,416
 Scoresbysund, Greenland, 437
 Shelburne, Canada, 2,047
 Sondre Honningsvag, Norway, 1,321
 Stornoway, Scotland, 647
 Sukkertoppen, Greenland, 1,146
 Thule, Greenland, 1,898
 Torshavn, Faeroe Islands, 516
 Trondheim, Norway, 969
 Upernivik, Greenland, 1,610

RIGA, LATVIA

(56°57'30'' N., 24°05'30'' E.) to:

Junction Points*

Kiel Canal (east end), Germany, 555
 Skagens Odde, Denmark (via Store Baelt), 747
 Skagens Odde, Denmark (via The Sound), 617

Ports

Gayle, Sweden, 355
 Hamina, Finland, 384
 Kobenhavn, Denmark, 696
 Kotka, Finland, 296
 Musko Island, Sweden, 250
 Norrkoping, Sweden, 300
 Ornskoldsvik, Sweden, 461
 Oslo, Norway (via Store Baelt), 871
 Oslo, Norway (via The Sound), 739
 Porkkala, Finland, 284
 Reposaari, Finland, 394
 Ruch'i, U.S.S.R., 403

RIJECKA, YUGOSLAVIA. See Rijeka.

RIJEKA, YUGOSLAVIA

(45°19'37'' N., 14°25'51'' E.) to:

Junction Points*

Port Said, U.A.R. (via Corinth Canal), 1,263
 Port Said, U.A.R. (south of Greece), 1,276
 Strait of Gibraltar, 1,648

Ports

Alexandria, U.A.R., 1,166
 Alger, Algeria, 1,220
 Alicante, Spain, 1,375
 Ancona, Italy, 112
 Annaba, Algeria, 1,000
 Banghazi, Libya, 868
 Barcelona, Spain, 1,279
 Bari, Italy, 288

Bayrut, Lebanon (via Corinth Canal), 1,312
 Bayrut, Lebanon (south of Greece), 1,345
 Bizerte, Tunisia, 910
 Brindisi, Italy, 342
 Cartagena, Spain, 1,405
 Ceuta, Morocco, 1,628
 Chioggia, Italy, 126
 Dubrovnik, Yugoslavia, 276
 Genova, Italy, 1,085
 Gibraltar, 1,630
 Haifa, Israel (via Corinth Canal), 1,315
 Haifa, Israel (south of Greece), 1,342
 Iraklion, Crete, 831
 Istanbul, Turkey (via Corinth Canal), 1,029
 Istanbul, Turkey (south of Greece), 1,128
 Izmir, Turkey (via Corinth Canal), 875
 Izmir, Turkey (south of Greece), 974
 La Spezia, Italy, 1,049
 Livorno, Italy, 1,013
 Malaga, Spain, 1,578
 Marseille, France, 1,176
 Messina, Sicily, 603
 Napoli, Italy, 774
 Odessa, U.S.S.R. (via Corinth Canal), 1,377
 Odessa, U.S.S.R. (south of Greece), 1,476
 Oran, Algeria, 1,417
 Palermo, Sicily, 719
 Palma, Balearic Islands, 1,238
 Piraeus, Greece (via Corinth Canal), 675
 Piraeus, Greece (south of Greece), 814
 Ploce, Yugoslavia, 230
 Savona, Italy, 1,095
 Sibenik, Yugoslavia, 158
 Siracusa, Sicily, 624
 Split, Yugoslavia, 176
 Tarabulus, Libya, 887
 Taranto, Italy, 482
 Thessaloniki, Greece (via Corinth Canal), 924
 Thessaloniki, Greece (south of Greece), 1,023
 Toulon, France, 1,145
 Trieste, Free Territory, 120
 Tunis, Tunisia, 897
 Valencia, Spain, 1,363
 Valletta, Malta, 701
 Venezia, Italy, 132
 Volos, Greece (via Corinth Canal), 865
 Volos, Greece (via south of Greece), 964

*JUNCTION POINT.—See Preface for use of junction points.

RIO DE JANEIRO, BRAZIL

(22°53'30" S., 43°11'00" W.) to:

Junction Points*

Bishop Rock, England, 4,846
Cape of Good Hope, Republic of South Africa, 3,267
Fastnet, Ireland, 4,873
Inishtrahull, Ireland, 5,143
Montreal, Canada (via Cabot Strait), 5,215
Montreal, Canada (via Strait of Canso), 5,218
Pentland Firth, Scotland, 5,391
Punta Arenas, Chile, 2,238
Strait of Gibraltar, 4,180
Straits of Florida (via Mona Passage), 4,612
Ushant, France, 4,815
Yucatan Channel, 4,622

Ports

Baltimore, Maryland, U.S.A., 4,844
Belem, Brazil, 2,174
Bordeaux, France, 4,908
Boston, Massachusetts, U.S.A., 4,738
Brest, France, 4,841
Bridgetown, Barbadoes, 3,157
Brunswick, Georgia, U.S.A., 4,744
Buenos Aires, Argentina, 1,151
Cadiz, Spain, 4,192
Cape Town, Republic of South Africa, 3,273
Castries, St. Lucia, 3,274
Charleston, South Carolina, U.S.A., 4,696
Charlotte Amalie, Virgin Islands, 3,542
Charlottetown, Canada, 4,730
Cienfuegos, Cuba, 4,426
Clarence Bay, Ascension Island, 1,900
Colon, Panama, 4,284
Dakar, Senegal, 2,763
Freetown, Sierra Leone, 2,613
Funchal, Madeira Island, 3,722
Georgetown, British Guiana, 2,853
Guantanamo, Cuba, 4,106
Guiria, Venezuela, 3,284
Habana, Cuba, 4,570
Halifax, Canada, 4,630
Hamilton, Bermuda, 4,110
Horta, Azores, 3,897
Jacksonville, Florida, U.S.A., 4,707
Key West, Florida, U.S.A., 4,560
Kingston, Jamaica, 4,124
Lisboa, Portugal, 4,219
Maceio, Brazil, 972
Montevideo, Uruguay, 1,037
Natal, Brazil, 1,228
New York, New York, U.S.A., 4,762
Norfolk, Virginia, U.S.A., 4,723
Paramaribo, Surinam, 2,713

Philadelphia, Pennsylvania, U.S.A., 4,817
Ponce, Puerto Rico, 3,659
Ponta Delgada, Azores, 3,875
Port au Prince, Haiti, 4,157
Port of Spain, Trinidad, 3,178
Portland, Maine, U.S.A., 4,772
Porto Grande, Cape Verde Islands, 2,687
Puerto Cortes, Honduras, 4,813
Rio Grande, Brazil, 750
St. Helena Island, 2,161
St. John, Canada, 4,752
St. John's, Canada, 4,563
Salvador, Brazil, 748
San Juan, Puerto Rico, 3,613
Santa Cruz de Tenerife, Canary Islands, 3,518
Santo Domingo, Dominican Republic, 3,780
Savannah, Georgia, U.S.A., 4,726
Sydney, Canada, 4,648
Vigo, Spain, 4,418
Wilmington, North Carolina, U.S.A., 4,704

RIO GRANDE, ARGENTINA

(53°45'30" S., 67°37'43" W.) to:

Junction Points*

Panama, Panama, 6,513
Punta Arenas, Chile, 220

Ports

Buenos Aires, Argentina, 1,306
Stanley, Falkland Island, 398

RIO GRANDE, BRAZIL

(32°03'00" S., 52°04'30" W.) to:

Ports

Buenos Aires, Argentina, 440
Guiria, Venezuela, 3,984
Montevideo, Uruguay, 313
Ponte Noire, Gabon, 3,938
Rio de Janeiro, Brazil, 750
Santos, Brazil, 602

RIO YATERAS, CUBA

(19°57'30" N., 74°56'30" W.) to:

Junctions Points*

Panama, Panama, 743
Straits of Florida, 622

Ports

Habana, Cuba, 577
Montego Bay, Jamaica, 196
San Juan, Puerto Rico, 525

RISOR, NORWAY

(58°43'12" N., 9°14'40" E.) to:

Junction Points*

Pentland Firth, Scotland, 429
Skagens Odde, Denmark, 73

Ports

Bergen, Norway, 279
London, England, 572
Oslo, Norway, 106

RITENBENK, GREENLAND

(69°45'30" N., 51°18'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 2,135
Strait of Gibraltar, 2,982

Ports

Churchill, Canada, 1,695
Reykjavik, Iceland, 1,581
St. John's, Canada, 1,504

RIVER CESS, LIBERIA

(5°26'57" N., 9°35'02" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,874
Ushant, France, 2,940

Ports

Dakar, Senegal, 790
Takoradi, Ghana, 508

ROATAN, GULF OF HONDURAS.

See Coxen Hole.

ROCHEFORT, FRANCE

(45°56'12" N., 0°57'15" W.)

Add 17 miles to La Pallice distances.

ROCHESTER, ENGLAND

(51°23'30" N., 0°30'12" E.)

Subtract 19 miles from London distances.

ROCKHAMPTON, AUSTRALIA

(23°23'00" S., 150°32'00" E.) to:

Junction Points*

Torres Strait, Australia, 1,034
Wilson Promontory, Australia, 1,213

Ports

Brisbane, Australia, 391
Noumea, New Caledonia, 902
Wellington, New Zealand, 1,685

*JUNCTION POINT.—See Preface for use of junction points.

RODHOS, RODHOS

(36°26'30" N., 28°16'30" E.) to:

Junction Points*

Port Said, U.A.R., 376
 Strait of Gibraltar, 1,668

Ports

Bayrut, Lebanon, 393
 Iraklion, Crete, 171
 Istanbul, Turkey, 445
 Izmir, Turkey, 256
 Piraeus, Greece, 261
 Tarabulus, Libya, 780
 Thessaloniki, Greece, 388

RODI, RODHOS. See Rodhos.

ROMANA, DOMINICAN REPUBLIC

(18°25'00" N., 68°57'10" W.) to:

Ports

Santo Domingo, Dominican Republic, 61
 San Pedro de Macoris, Dominican Republic, 21

RONGELAP, MARSHALL ISLANDS

(11°10'00" N., 166°51'00" E.) to:

Junction Points*

Panama, Panama, 4,843
 Singapore, 3,669

Ports

Apra, Guam, 1,341
 Honolulu, Hawaii, U.S.A., 1,638

RONNE, BORNHOLM, DENMARK

(55°06'00" N., 14°41'40" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 175
 Skagens Odde, Denmark (via Store Baelt), 367
 Skagens, Odde, Denmark (via The Sound), 244

Ports

Oslo, Norway (via Store Baelt), 491
 Oslo, Norway (via The Sound), 366

ROOSEVELT ROADS, PUERTO RICO

(18°10'00" N., 65°34'00" W.) to:

Junction Points*

Panama, Panama, 1,054
 Straits of Florida, 1,063

Ports

New York, New York, U.S.A., 1,429
 Port of Spain, Trinidad, 525
 Willemstad, Curacao, 440

ROSARIO, ARGENTINA

(32°56'30" S., 60°38'00" W.)

Add 191 miles to Buenos Aires distances.

ROSEAU, DOMINICA

(15°17'15" N., 61°24'00" W.) to:

Ports

Basse-Terre, Guadeloupe, 48
 Fort de France, Martinique, 50
 Frederiksted, St. Croix, 252
 Hamilton, Bermuda, 1,061
 Pointe a Pitre, Guadeloupe, 60

ROSENEATH, SCOTLAND

(56°00'30" N., 4°47'30" W.)

Subtract 15 miles from Glasgow distances.

ROSTOCK, GERMANY

(54°05'52" N., 12°09'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 92
 Skagens Odde, Denmark, 254

Ports

Kobenhavn, Denmark, 231
 Klaipeda, Lithuania, 347
 Stockholm, Sweden, 456

ROSTOV, U.S.S.R. See Rostov-na-Donu.

ROSTOV-NA-DONU, U.S.S.R.

(47°11'30" N., 39°40'10" E.) to:

Junction Points*

Port Said, U.A.R., 1,440
 Strait of Gibraltar (via Corinth Canal), 2,441
 Strait of Gibraltar (south of Greece), 2,458

Ports

Constanta, Rumania, 572
 Derince, Turkey, 685
 Iskenderun, Turkey, 1,483
 Istanbul, Turkey, 640
 Jaffa, Israel, 1,496

Kerch, U.S.S.R., 208

Larnaca, Cyprus, 1,402

Mersin, Turkey, 1,426

Pula, Yugoslavia (via Corinth Canal), 1,646

Pula, Yugoslavia (south of Greece), 1,745

Sfax, Tunisia, 1,684

ROSYTH, SCOTLAND

(56°01'15" N., 3°27'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 263
 Skagens Odde, Denmark, 478

Ports

Hull, England, 248
 Oslo, Norway, 550
 Rotterdam, Netherlands, 393

ROTA, SPAIN

(36°37'15" N., 6°20'00" W.) to:

Junction Points*

Strait of Gibraltar, 70
 Ushant, France, 885

Ports

Casablanca, Morocco, 202
 Horta, Azores, 1,096
 Porto de Leixoes, Portugal, 454

ROTOAVA, TUAMOTU ARCHIPELAGO

(16°02'30" S., 145°37'00" W.) to:

Junction Points*

Panama, Panama, 4,256

Ports

Apia, Samoa, 1,520
 Apra, Guam, 4,513
 Honolulu, Hawaii, U.S.A., 2,358
 Levuka, Fiji Islands, 2,060
 Noumea, New Caledonia, 2,737
 Papeete, Society Islands, 244
 Rabaul, New Britain, 3,743
 San Francisco, California, U.S.A., 3,503

ROTTERDAM, NETHERLANDS

(51°54'00" N., 4°28'00" E.) to:

Junction Points*

Bishop Rock, England, 454
 Kiel Canal (east end), Germany, 323
 Pentland Firth, Scotland, 495
 Skagens Odde, Denmark, 447
 Ushant, France, 444

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Aberdeen, Scotland, 391
 Amsterdam, Netherlands, 67
 Antwerpen, Belgium (via Westka-
 pelle), 117
 Bergen, Norway, 533
 Bremerhaven, Germany, 256
 Brest, France, 457
 Cherbourg, France, 282
 Den Helder, Netherlands, 97
 Dover, England, 138
 Dundee, Scotland, 383
 Egersund, Norway, 412
 Emden, Germany, 199
 Esbjerg, Denmark, 287
 Fecamp, France, 228
 Hamburg, Germany, 307
 Hartlepool, England, 269
 Hull, England, 211
 Inverness, Scotland, 496
 Kristiansand, Norway, 413
 Le Havre, France, 250
 Leith, Scotland, 381
 London, England, 184
 Narvik, Norway, 1,139
 Newcastle, England, 285
 Oostende, Belgium, 86
 Oslo, Norway, 554
 Plymouth, England, 367
 Portland, England, 293
 Portsmouth, England, 243
 Rosyth, Scotland, 393
 Seaham Harbor, England, 278
 Southampton, England, 261
 Stavanger, Norway, 455
 Sunderland, England, 286
 Vardo, Norway, 1,513
 Wilhelmshaven, Germany, 243
 Zeebrugge, Belgium, 73

RUCH'I, U.S.S.R.

(59°45'30'' N., 28°25'00'' E.) to:

Junction Points*

Kiel Canal (east end), Germany, 766
 Skagens Odde, Denmark, 816

Ports

Gdynia, Poland, 530
 Riga, Latvia, 403
 Stockholm, Sweden, 344

ROUEN, FRANCE

(49°26'30'' N., 1°04'00'' E.)

Add 69 miles to Le Havre distances.

RUMOI, JAPAN

(43°57'30'' N., 141°38'00'' E.) to:

Ports
 Hakodate, Japan, 248
 Otaru, Japan, 57
 Pusan, Korea, 793
 Shimonoseki, Japan, 812
 Vladivostok, U.S.S.R., 452

RYOJUN, CHINA. See Lu-Shun.**SABANG, INDONESIA**

(5°53'30'' N., 95°19'15'' E.) to:

Junction Points*

Cape Leeuwin, Australia, 2,711
 Cape of Good Hope, Republic of South
 Africa, 4,980
 Lombok Strait, Indonesia, 1,575
 Port Said, United Arab Republic, 4,422
 Singapore, 601
 Sunda Strait, Indonesia, 1,103
 Torres Strait, Australia, 3,072

Ports

Aden, Aden Protectorate, 3,033
 Al Bahrayn, Bahrain, 3,050
 Al Basrah, Iraq, 3,287
 Al Kuwayt, Kuwait, 3,234
 Antsirana, Malagasy Republic, 2,955
 Beira, Mozambique, 3,921
 Belawan, Indonesia, 268
 Berbera, Somali Republic, 3,047
 Bombay, India, 1,843
 Bushehr, Iran, 3,106
 Calcutta, India (via Duncan Passage),
 1,131
 Calicut, India, 1,343
 Cocanada, India, 1,019
 Dar es Salaam, Tanganyika, 3,443
 Diego Garcia, Chagos Archipelago,
 1,594
 Durban, Republic of South Africa,
 4,273
 Fremantle, Australia, 2,601
 Fort Dauphin, Malagasy Republic,
 3,376
 Karachi, Pakistan, 2,284
 Lourenco Marques, Mozambique, 4,170
 Madras, India, 994
 Majunga, Malagasy Republic, 3,246
 Malacca, Malaysia, 486
 Mocambique, Mozambique, 3,481
 Mombassa, Kenya, 3,388
 Mosselbaai, Republic of South Africa,
 4,785
 Penang, Malaysia, 313
 Port Elizabeth, Republic of South
 Africa, 4,610
 Port Louis, Mauritius, 2,731
 Rangoon, Burma, 664
 St. Denis, Reunion Island, 2,846

Tamatave, Malagasy Republic, 3,076
 Victoria, Seychelles, 2,468
 Zanzibar, Zanzibar, 3,461

SAFI, MOROCCO

(32°18'35'' N., 9°15'15'' W.) to:

Junction Points*

Cape of Good Hope, Republic of South
 Africa, 4,870
 Ushant, France, 1,023

Ports

Casablanca, Morocco, 134
 Dakar, Senegal, 1,228
 St. Louis, Senegal, 1,157

SAIDA, LEBANON. See Sayda.**SAI GON, VIETNAM**

(10°46'00'' N., 106°42'15'' E.) to:

Junction Points*

Lombok Strait, Indonesia, 1,408
 Panama, Panama, 10,017
 Singapore, 649
 Torres Strait, Australia, 2,629

Ports

Aleksandrovsk, U.S.S.R., 3,105
 Apra, Guam, 2,304
 Ban Sattahip, Thailand, 598
 Cebu, Philippines (north of North
 Danger Reef, via Mindoro Strait,
 and Jintotolo Channel), 1,152
 Chan-Chiang, China, 838
 Chang-kan, China, 708
 Ching-iao, China, 1,969
 Chinnampo, Korea, 2,118
 Da Nang, Vietnam, 578
 Djakarta, Indonesia, 1,025
 Dutch Harbor, Alaska, U.S.A., 4,894
 Guayaquil, Ecuador, 10,321
 Hai-kou, Hai-nan Tao, 824
 Haiphong, Vietnam, 802
 Hong Kong, B.C.C., 917
 Honolulu, Hawaii, U.S.A., 5,542
 Iloilo, Philippines, 1,051
 Inchon, Korea, 2,057
 Iwakuni, Japan, 2,108
 Kodiak, Alaska, U.S.A., 5,484
 Los Angeles, California (via San Ber-
 nardino Strait), 7,403
 Malakal, Palau Islands, 1,801
 Manila, Philippines, 907
 Midway Island, 4,421
 Mokpo, Korea, 1,904
 Nha Trang Bay, Vietnam, 264
 Olongapo, Philippines, 872
 Pago Pago, American Samoa, 5,216

*JUNCTION POINT.—See Preface for use of junction points.

Palembang, Indonesia, 869
 Palmyra Island (via San Bernardino Strait), 5,480
 Papeete, Society Islands, 6,443
 Pei-hai, China, 837
 Peng-hu Chiang, Taiwan, 1,174
 Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilsky, La Perouse Strait, and Korea Strait), 3,718
 Port Legaspi, Philippines, 1,177
 Pusan, Korea, 1,999
 Qui Nhon, Vietnam, 361
 San Diego, California, U.S.A., 7,267
 San Fernando, Philippines, 927
 San Francisco, California, U.S.A., 6,878
 San-ya Chiang, China, 624
 Seletar, Malaysia, 652
 Sihanoukville, Cambodia, 419
 Sitka, Alaska, U.S.A., 5,963
 Surabaya, Indonesia, 1,206
 Suva, Fiji Islands, 4,679
 Tandjung Uban, Indonesia, 633
 Teluk Kau, Halmahera, 1,520
 Truk, Caroline Islands (via San Bernardino Strait), 2,799
 Tso-Ying, Taiwan, 1,131
 Vladivostok, U.S.S.R., 2,501
 Wake Island, 3,580
 Wonsan, Korea, 2,305
 Yokohama, Japan, 2,419
 Yu-lin Chiang, Hainan-tao, China, 619

SAIGON, VIETNAM. See Sai Gon.

ST. CHRISTOPHER ISLAND. See Basseterre.

ST. CROIX ISLAND. See Christiansted and Frederiksted.

ST. DENIS, REUNION ISLAND
 (20°51'00" S., 55°25'30" E.) to:

Junction Points*
 Singapore, 3,445

Ports
 Beira, Mozambique, 1,325
 Belawan, Indonesia, 3,112
 Darwin, Australia, 4,343
 Fremantle, Australia, 3,272
 Lourenco Marques, Mozambique, 1,325
 Malacca, Malaysia, 3,330
 Penang, Malaysia, 3,157
 Sabang, Indonesia, 2,846

ST. GEORGES, GRENADA
 (12°03'00" N., 61°45'00" W.) to:

Junction Points*
 Panama, Panama, 1,161
 Straits of Florida, 1,453

Ports
 Baltimore, Maryland, U.S.A., 1,843
 Boston, Massachusetts, U.S.A., 1,932
 Bridgetown, Barbados (north of island), 144
 Colon, Panama, 1,118
 Hamilton, Bermuda, 1,256
 La Guaira, Venezuela, 322
 New York, New York, U.S.A., 1,842
 Paramaribo, Surinam, 560
 Philadelphia, Pennsylvania, U.S.A., 1,848
 Port of Spain, Trinidad, 102

ST. HELENA ISLAND, SOUTH ATLANTIC
 (15°55'00" S., 5°43'25" W.) to:

Ports
 Belem, Brazil, 4,329
 Boma, Republic of the Congo, 1,232
 Buenos Aires, Argentina, 3,052
 Cape Town, Republic of South Africa, 1,697
 Clarence Bay, Ascension Island, 707
 Freetown, Sierra Leone, 1,564
 Montevideo, Uruguay, 2,936
 Philadelphia, Pennsylvania, U.S.A., 5,169
 Rio de Janeiro, Brazil, 2,161
 Santa Isabel, Fernando Poo, 1,472

ST. JOHN, CANADA
 (45°16'00" N., 66°04'00" W.) to:

Junction Points*
 Montreal, Canada (via Cabot Strait), 1,209
 Panama, Panama, 2,361
 Straits of Florida, 1,568

Ports
 Baltimore, Maryland, U.S.A. (via Nantucket Light Vessel), 860
 Bath, Maine, U.S.A., 206
 Belem, Brazil, 2,998
 Boston, Massachusetts, U.S.A., 286
 Buenos Aires, Argentina, 5,853
 Cape Town, Republic of South Africa, 6,667
 Colon, Panama, 2,294
 Habana, Cuba, 1,574
 Halifax, Canada, 278

Kingston, Jamaica, 1,794
 La Guaira, Venezuela, 2,086
 Liverpool, Canada, 212
 New York, New York, U.S.A., (via Nantucket Light Vessel), 545
 New York, New York, U.S.A. (via Vineyard Sound and Long Island Sound), 486
 Norfolk, Virginia, U.S.A., 731
 Parrsboro, Canada, 80
 Philadelphia, Pennsylvania, U.S.A. (via Vineyard Sound), 673
 Philadelphia, Pennsylvania, U.S.A. (via Nantucket Light Vessel), 698
 Port of Spain, Trinidad, 2,113
 Portland, Maine, U.S.A., 215
 Portsmouth, New Hampshire, U.S.A., 248
 Rio de Janeiro, Brazil, 4,752
 San Juan, Puerto Rico, 1,614
 Santo Domingo, Dominican Republic, 1,733
 Savannah, Georgia, U.S.A. (via Nantucket Light Vessel), 1,113
 Sydney, Canada, 492

ST. JOHNS, ANTIGUA
 (17°08'00" N., 61°52'00" W.) to:

Ports
 Belem, Brazil, 1,433
 Castries, St. Lucia, 204
 Charlestown, Nevis, 48
 Colon, Panama, 1,158
 Elizabeth Harbor, Bahamas, 900
 Georgetown, British Guiana, 689
 Guantanamo, Cuba, 837
 Kingston, Jamaica, 870
 Miami, Florida, U.S.A., 1,180
 New York, New York, U.S.A., 1,572
 Pointe a Pitre, Guadeloupe (via east of Guadeloupe), 107
 Pointe a Pitre, Guadeloupe (via west of Guadeloupe), 110
 Port of Spain, Trinidad, 411
 Puerto Cortes, Honduras, 1,511
 Sint Nicolaas, Aruba, 549
 San Juan, Puerto Rico, 265

ST. JOHN'S, CANADA
 (47°34'00" N., 52°42'00" W.) to:

Junction Points*
 Bishop Rock, England, 1,804
 Inishtrahull, Ireland, 1,720
 Montreal, Canada (via Cabot Strait), 1,043
 Montreal, Canada (via Strait of Belle Isle), 1,146

*JUNCTION POINT.—See Preface for use of junction points.

Panama, Panama, 2,742
 Pentland Firth, Scotland, 1,855
 Punta Arenas, Chile, 6,735
 Strait of Gibraltar, 2,182
 Straits of Florida, 2,094

Ports

Akureyri, Iceland, 1,616
 Angmagssalik, Greenland (direct), 1,193
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 1,208
 Baltimore, Maryland, U.S.A., 1,400
 Belem, Brazil, 2,968
 Boston, Massachusetts, U.S.A., 885
 Buenos Aires, Argentina, 5,663
 Camp Lloyd, Greenland, 1,198
 Cape Town, Republic of South Africa, 5,205
 Christianshaab, Greenland, 1,333
 Colon, Panama, 2,695
 Dakar, Senegal, 2,646
 Egedesminde, Greenland, 1,294
 El Ferrol del Caudillo, Spain, 1,861
 Faeringehavn, Greenland, 969
 Frederiksdal, Greenland, 800
 Galway, Ireland, 1,678
 Godthaab, Greenland, 1,005
 Goose Bay, Canada, 588
 Gronne Dal, Greenland, 847
 Hafnarfjordhur, Iceland, 1,413
 Halifax, Canada, 531
 Holsteinsborg, Greenland, 1,172
 Hvalfjordhur, Iceland, 1,437
 Ivigtut, Greenland, 849
 Jakobshavn, Greenland, 1,341
 Julianehaab, Greenland, 827
 Keflavik, Iceland, 1,404
 Liverpool, Canada, 212
 Nanortalik, Greenland, 821
 Narsarssuak, Greenland, 916
 Natal, Brazil, 3,341
 New York, New York, U.S.A., 1,093
 Norfolk, Virginia, U.S.A., 1,277
 Paramaribo, Surinam, 2,518
 Philadelphia, Pennsylvania, U.S.A., 1,254
 Ponta Delgada, Azores, 1,326
 Port of Spain, Trinidad, 2,288
 Qutdligssat, Greenland, 1,476
 Recife, Brazil, 3,491
 Reykjavik, Iceland, 1,416
 Rio de Janeiro, Brazil, 4,563
 Ritenbenk, Greenland, 1,504
 Santa Cruz de Tenerife, Canary Islands, 2,053
 Scoresbysund, Greenland, 1,643
 Seydhisfjordhur, Iceland, 1,690
 Shelburne, Canada, 621
 Sukkertoppen, Greenland, 1,075

Thule, Greenland, 1,800
 Upernivik, Greenland, 1,532

ST. LOUIS, MARIE GALANTE
 (15°57'30" N., 61°20'00" W.) to:

Junction Points*
 Panama, Panama, 1,850

Ports
 Barranquilla, Colombia, 857
 Kingston, Jamaica, 903
 Port of Spain, Trinidad, 368

ST. LOUIS, SENEGAL
 (16°01'30" N., 16°32'00" W.) to:

Junction Points*
 Strait of Gibraltar, 1,436
 Ushant, France, 2,075

Ports
 Porto Grande, Cape Verde Islands, 496
 Safi, Morocco, 1,157

ST. LUCIA ISLAND. See Castries.

ST. MALO, FRANCE
 (48°38'40" N., 2°01'38" W.) to:

Junction Points*
 Bishop Rock, England, 90
 Ushant, France, 141

Ports
 Brest, France, 152
 Dover, England, 228
 Le Havre, France, 156

ST. MARC, HAITI
 (19°07'00" N., 72°42'10" W.) to:

Junction Points*
 Panama, Panama, 796
 Straits of Florida, 673

Ports
 Kingston, Jamaica, 254
 Nuevitas, Cuba, 306

ST. NAZAIRE, FRANCE
 (47°16'00" N., 2°12'00" W.) to:

Junction Points*
 Ushant, France, 184

Ports
 Aviles, Spain, 274
 Bordeaux, France, 184

Gijon, Spain, 274
 La Pallice, France, 108

ST. PETERSBURG, FLORIDA, U.S.A.
 (27°46'00" N., 82°37'00" W.)

Subtract 15 miles from Tampa distances.

ST. PIERRE, MARTINIQUE
 (14°44'30" N., 61°11'15" W.) to:

Ports
 Castries, St. Lucia, 46
 Habana, Cuba, 1,339
 New York, New York, U.S.A. (via Anegada Channel), 1,705
 San Juan, Puerto Rico, 374

ST. RAPHAEL, FRANCE
 (43°25'21" N., 6°45'45" E.) to:

Junction Points*
 Port Said, U.A.R., 1,475
 Strait of Gibraltar, 763

Ports
 Barcelona, Spain, 251
 Genova, Italy, 118
 Palma, Balearic Islands, 347

ST. THOMAS, VIRGIN ISLANDS
 See Charlotte Amalie.

ST. VINCENT. See Kingstown.

SAIPAN, MARIANA ISLANDS
 (15°13'40" N., 145°44'00" E.) to:

Ports
 Honolulu, Hawaii, U.S.A., 3,230
 Jaluit, Marshall Islands, 1,545
 Koniya, Ryukyu Islands, 750
 Omura, Bonin Islands, 750
 Sydney, Australia, 3,077
 Truk, Caroline Islands, 610

SAKAIDECCHO, JAPAN
 (34°19'45" N., 133°51'30" E.) to:

Ports
 Hirohata, Japan, 89
 Kobe, Japan, 107
 Kure, Japan, 107
 Shimonoseki, Japan, 169
 Yokohama, Japan (via Kii Suido), 449

*JUNCTION POINT.—See Preface for use of junction points.

SAKATA, JAPAN

(38°55'30" N., 139°48'00" E.) to:

Ports

Hakodate, Japan, 189
Maizuru, Japan, 314
Pusan, Korea, 577
Shimonoseki, Japan, 554
Vladivostok, U.S.S.R., 442

SALAMIS, GREECE

(37°57'30" N., 23°29'12" E.) to:

Junction Points*

Port Said, U.A.R., 614
Strait of Gibraltar, 1,520

Ports

Durres, Albania, 343
Iraklion, Crete, 190
Izmir, Turkey, 225

SALAVERRY, PERU

(8°14'30" S., 78°58'00" W.) to:

Junction Points*

Panama, Panama, 1,109

Ports

Callao, Peru, 266
Guayaquil, Ecuador, 440
Pimentel, Peru, 104
San Francisco, California, U.S.A., 3,750

SALERNO, ITALY

(40°40'15" N., 14°45'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,098
Strait of Gibraltar, 1,018

Ports

Civitavecchia, Italy, 204
Messina, Sicily, 158
Palermo, Sicily, 167

SALINA CRUZ, MEXICO

(16°10'00" N., 95°12'00" W.) to:

Junction Points*

Panama, Panama, 1,170
Punta Arenas, Chile, 4,478

Ports

Acapulco, Mexico, 314
Antofagasta, Chile, 2,799
Apia, Samoa, 4,886
Arica, Chile, 2,579
Callao, Peru, 2,005
Coquimbo, Chile, 3,091

Corinto, Nicaragua, 525

Corral, Chile, 3,577

Esmeraldas, Ecuador, 1,290

Guayaquil, Ecuador, 1,495

Guaymas, Mexico, 1,260

Honolulu, Hawaii, U.S.A., 3,580

Iquique, Chile, 2,645

La Libertad, El Salvador, 391

Los Angeles, California, U.S.A., 1,803

Lota, Chile, 3,430

Mollendo, Peru, 2,454

Monterey, California, U.S.A., 2,055

Pago Pago, American Samoa, 4,839

Pisco, Peru, 2,117

San Blas, Mexico, 804

San Diego, California, U.S.A., 1,733

San Francisco, California, U.S.A.,
2,135

San Juan del Sur, Nicaragua, 619

Santa Barbara, California, U.S.A.,
1,870

Talcahuano, Chile, 3,414

Valparaiso, Chile, 3,247

SALINAS, ECUADOR

(2°12'00" S., 80°59'00" W.)

Use La Libertad, distances.

SALONIKA, GREECE. See Thes-
saloniki.

SALVADOR, BRAZIL

(12°58'00" S., 38°31'00" W.) to:

Junction Points*

Montreal, Canada (via Cabot Strait),
4,673

Montreal, Canada (via Strait of
Canso), 4,676

Panama, Panama, 3,741

Punta Arenas, Chile, 2,920

Strait of Gibraltar, 3,516

Straits of Florida, 3,931

Ushant, France, 4,134

Ports

Angra dos Reis, Brazil, 902

Baltimore, Maryland, U.S.A., 4,163

Boston, Massachusetts, U.S.A., 4,060

Bridgetown, Barbados, 2,476

Brunswick, Georgia, U.S.A., 4,063

Buenos Aires, Argentina, 1,849

Cabedelo, Brazil, 468

Castries, St. Lucia, 2,593

Charleston, South Carolina, U.S.A.,
4,040

Charlotte Amalie, Virgin Islands, 2,907

Charlottetown, Canada, 4,049

Colon, Panama, 3,608

Georgetown, British Guiana, 2,172

Halifax, Canada, 3,949

Maceio, Brazil, 285

Montevideo, Uruguay, 1,735

New York, New York, U.S.A., 4,089

Norfolk, Virginia, U.S.A., 4,042

Philadelphia, Pennsylvania, U.S.A.,
4,136

Portland, Maine, U.S.A., 4,091

Recife, Brazil, 399

Rio de Janeiro, Brazil, 748

Savannah, Georgia, U.S.A., 4,072

Sydney, Canada, 3,967

Vitoria, Brazil, 477

Wilmington, North Carolina, 4,023

SAMBO, INDONESIA. See Sambu.

SAMBU, INDONESIA

(1°10'00" N., 103°54'00" E.)

Use Singapore distances.

SAMSUN, TURKEY

(41°19'36" N., 36°22'00" E.)

Add 370 miles to Istanbul distances
for ports outside the Black Sea.

SAN ANTONIO, CHILE

(33°35'00" S., 71°39'00" W.) to:

Junction Points*

Panama, Panama, 2,644
Punta Arenas, Chile, 1,410

Ports

Antofagasta, Chile, 600
Callao, Peru, 1,328
Tocopilla, Chile, 692

SAN BLAS, MEXICO

(21°32'00" N., 105°19'00" W.) to:

Junction Points*

Panama, Panama, 1,914
Punta Arenas, Chile, 4,961

Ports

Acapulco, Mexico, 502
Antofagasta, Chile, 3,438
Arica, Chile, 3,225
Callao, Peru, 2,661
Coquimbo, Chile, 3,697
Corinto, Nicaragua, 1,282
Esmeraldas, Ecuador, 2,011
Guayaquil, Ecuador, 2,184
Guaymas, Mexico, 501

*JUNCTION POINT.—See Preface for use of junction points.

Iquique, Chile, 3,294
 La Libertad, Mexico, 660
 Lota, Chile, 3,990
 Mollendo, Peru, 3,100
 Monterey, California, U.S.A., 1,337
 Pisco, Peru, 2,771
 Puntarenas, Costa Rica, 1,500
 Salina Cruz, Mexico, 804
 San Diego, California, U.S.A., 1,015
 San Francisco, California, U.S.A., 1,417
 San Jose, Guatemala, 1,064
 Santa Barbara, California, U.S.A., 1,152
 Talcahuano, Chile, 3,977
 Valparaiso, Chile, 3,835

SAN DIEGO, CALIFORNIA, U.S.A.
 (32°43'00" N., 117°10'30" W.) to:

Junction Points*
 Panama, Panama, 2,843
 Punta Arenas, Chile, 5,801
 Singapore, 7,736
 Wilson Promontory, Australia (south of Fiji Islands), 6,873

Ports
 Acapulco, Mexico, 1,431
 Aleksandrovsk, U.S.S.R., 4,779
 Amapala, Honduras, 2,181
 Antofagasta, Chile, 4,360
 Apia, Samoa, 4,195
 Apra, Guam, 5,379
 Archipelago de Colon, 2,594
 Arica, Chile, 4,149
 Auckland, New Zealand, 5,655
 Bahia Magdalena, Mexico, 600
 Baie du Controleur, Marquesas, 2,828
 Brisbane, Australia, 6,306
 Brito, Nicaragua, 2,307
 Caldera, Chile, 4,492
 Callao, Peru, 3,585
 Canton, Phoenix Islands, 3,755
 Chimbote, Peru, 3,402
 Chin-tao, China, 5,805
 Coquimbo, Chile, 4,605
 Corinto, Nicaragua, 2,211
 Corral, Chile, 5,007
 Darwin, Australia (north of New Guinea), 7,297
 Djakarta, Indonesia, 7,985
 Dutch Harbor, Alaska, U.S.A., 2,465
 Esmeraldas, Ecuador, 2,940
 Guayaquil, Ecuador, 3,112
 Guaymas, Mexico, 1,088
 Hai-kou, Hai-nan Tao, 6,696
 Hilo, Hawaii, U.S.A., 2,175
 Hong Kong, B.C.C. (via Tsugaru Kaikyō), 6,439

Honolulu, Hawaii, U.S.A., 2,278
 Iquique, Chile, 4,218
 Kobe, Japan, 5,204
 Kodiak, Alaska, 2,121
 Kwajalein, Marshall Islands, 4,394
 La Libertad, Mexico, 1,246
 Lota, Chile, 4,881
 Manila, Philippines (via Balintang Channel), 6,604
 Manzanillo, Mexico, 1,136
 Mazatlan, Mexico, 939
 Midway Island, 3,097
 Mollendo, Peru, 4,024
 Naknek, Alaska, U.S.A., 2,788
 Noumea, New Caledonia, 5,491
 Omura, Bonin Islands, 5,063
 Pago Pago, American Samoa, 4,176
 Palmyra Island, 2,983
 Papeete, Society Islands, 3,554
 Pearl Harbor, Hawaii, U.S.A., 2,285
 Petropavlovsk, U.S.S.R., 3,707
 Pisco, Peru, 3,695
 Puntarenas, Costa Rica, 2,429
 Sai Gon, Vietnam, 7,267
 Salina Cruz, Mexico, 1,733
 San Blas, Mexico, 1,015
 San Jose, Guatemala, 1,993
 Shang-hai, China (via Tsugaru Kaikyō), 5,793
 Sitka, Alaska, 1,725
 Surabaya, Indonesia, 7,691
 Suva, Fiji Islands, 4,804
 Sydney, Australia (north of Fiji Islands), 6,530
 Talcahuano, Chile, 4,869
 Truk, Caroline Islands, 5,216
 Unalakleet, Alaska, U.S.A., 2,791
 Valparaiso, Chile, 4,738
 Vladivostok, U.S.S.R., 5,062
 Wake Island, 4,112
 Yokohama, Japan, 4,923

SAN FELIX, VENEZUELA
 (8°22'30" N., 62°40'00" W.) to:

Junction Points*
 Panama, Panama, 1,535
 Yucatan Channel, 1,861

Ports
 Belen, Brazil, 1,222
 La Guaira, Venezuela, 673

SAN FERNANDO, PHILIPPINES
 (16°38'00" N., 120°18'00" E.) to:

Junction Points*
 Singapore, 1,379

Ports
 Hong Kong, B.C.C., 489
 Kao-hsiung Chiang, Taiwan, 356
 Manila, Philippines, 207
 Sai Gon, Vietnam, 927

SAN FERNANDO, TRINIDAD
 (10°17'06" N., 61°32'57" W.) to:

Junction Points*
 Panama, Panama, 1,202
 Yucatan Channel, 1,548

Ports
 Belen, Brazil, 1,215
 La Guaira, Venezuela, 340

SAN FRANCISCO, CALIFORNIA, U.S.A.
 (37°48'30" N., 122°24'00" W.) to:

Junction Points*
 Panama, Panama, 3,245
 Punta Arenas, Chile, 6,188
 Singapore (via Balintang Channel), 7,353
 Singapore (via Tawitawi Island), 7,735
 Torres Strait, Australia, 6,249
 Wilson Promontory, Australia, 6,817

Ports
 Acajutla, El Salvador, 2,446
 Acapulco, Mexico, 1,833
 Aleksandrovsk, U.S.S.R., 4,372
 Amapala, Honduras, 2,586
 Anchorage, Alaska, U.S.A., 1,872
 Antofagasta, Chile, 4,762
 Apia, Samoa, 4,161
 Apra, Guam, 5,053
 Archipelago de Colon, 2,994
 Arica, Chile, 4,551
 Attu Island, Alaska, U.S.A. (via Amukta Pass), 2,765
 Auckland, New Zealand, 5,680
 Avarua, Cook Islands, 4,124
 Bahia Magdalena, Mexico, 1,002
 Baie du Controleur, Marquesas, 2,986
 Barbers Point, Hawaii, U.S.A., 2,100
 Brisbane, Australia (west of D'Entrecasteaux Reefs, and south of Belona Reefs), 6,193
 Brito, Nicaragua, 2,709
 Buenaventura, Colombia, 3,383
 Butaritari, Gilbert Islands, 4,122
 Caldera, Chile, 4,894
 Callao, Peru, 3,989
 Canton, Phoenix Islands, 3,663
 Chimbote, Peru, 3,804

*JUNCTION POINT.—See Preface for use of junction points.

Ching-tao, China, 5,403
 Christmas Island, North Pacific, 2,895
 Coquimbo, Chile, 5,007
 Corinto, Nicaragua, 2,613
 Corral, Chile, 5,407
 Darwin, Australia, 6,984
 Dutch Harbor, Alaska, U.S.A., 2,051
 Djakarta, Indonesia (via Balintang Channel), 7,642
 Eniwetok, Marshall Islands, 4,282
 Esmeraldas, Ecuador, 3,342
 Funafuti, Ellice Islands, 4,295
 Guaymas, Mexico, 1,490
 Hakodate, Japan, 4,246
 Hong Kong, B.C.C., 6,044
 Honolulu, Hawaii, U.S.A., 2,091
 Hsia-men, China (via Osumi Kaikyo), 5,797
 Hsia-men, China (via Tsugaru Kaikyo), 5,788
 Iloilo, Philippines, 6,168
 Iquique, Chile, 4,620
 Jaluit, Marshall Islands, 4,150
 Johnston Island, 2,779
 Juneau, Alaska, U.S.A., 1,371
 Kiska, Alaska, U.S.A., 2,629
 Kobe, Japan, 4,819
 Kodiak, Alaska, U.S.A., 1,693
 Kwajalein, Marshall Islands, 4,124
 La Union, El Salvador, 2,586
 Lele, Caroline Islands, 4,478
 Levuka, Fiji Islands, 4,705
 La Libertad, Mexico, 1,648
 Lota, Chile, 5,282
 Lu-shun, China (via Tsugaru Kaikyo), 5,477
 Manila, Philippines (via Balintang Channel), 6,221
 Manila, Philippines (via San Bernardino Strait), 6,299
 Manzanillo, Mexico, 1,538
 Mazatlan, Mexico, 1,337
 Melbourne, Australia (via South Channel), 6,970
 Midway Island, 2,792
 Mokpo, Korea, 5,125
 Mollendo, Peru, 4,426
 Nagasaki, Japan, 5,029
 Newcastle, Australia, 6,467
 Nikolayevsk, U.S.S.R. (via Unimak Pass), 4,099
 Nome, Alaska, U.S.A., 2,636
 Noumea, New Caledonia, 5,410
 Ocean Island, 4,406
 Omura, Bonin Islands, 4,688
 Pago Pago, American Samoa, 4,150
 Palmyra Island, 2,892
 Papeete, Society Islands, 3,663
 Petropavlovsk, U.S.S.R. (via Unimak Pass), 3,292
 Pisagua, Chile, 4,593

Pisco, Peru, 4,097
 Ponape, Caroline Islands, 4,641
 Prince Rupert, Canada, 1,090
 Puerto Armuelles, Panama, 2,973
 Puntarenas, Costa Rica, 2,831
 Pusan, Korea, 4,914
 Rabaul, New Britain, 5,396
 Rotoava, Tuamotu Archipelago, 3,503
 Sai Gon, Vietnam, 6,878
 Salaverry, Peru, 3,750
 Salina Cruz, Mexico, 2,135
 San Blas, Mexico, 1,417
 San Jose, Guatemala, 2,395
 Sasebo, Japan (via Osumi Kaikyo), 5,185
 Seward, Alaska, U.S.A., 1,701
 Shang-hai, China (via Tsugaru Kaikyo), 5,395
 Shang-hai, China (low power, November-March), 5,966
 Shang-hai, China (via Osumi Kaikyo), 5,502
 Shang-hai, China (alternate low power, November-March), 6,087
 Shang-hai, China (low power, April, May and October), 5,812
 Shan-tou, China (via Osumi Kaikyo), 5,900
 Shimonoseki, Japan (via Tsugaru Kaikyo), 4,910
 Sitka, Alaska, U.S.A., 1,302
 Surabaya, Indonesia, 7,343
 Suva, Fiji Islands, 4,749
 Sydney, Australia, 6,448
 Taio Hae, Marquesas, 2,987
 Ta-ku, China (via Tsugaru Kaikyo), 5,615
 Ta-ku, China (via Osumi Kaikyo), 5,856
 Talara, Peru, 3,494
 Talcahuano, Chile, 5,270
 Ta-lien, China (via Tsugaru Kaikyo), 5,456
 Ta-lien, China (south of Honshu), 5,697
 Ta-lien, China (low power, April, May and October), 6,007
 Ta-lien, China (low power, November-March), 6,282
 Taltal, Chile, 4,838
 Tan-shui, Taiwan (via Osumi Kaikyo), 5,611
 Tan-shui, Taiwan (via Tsugaru Kaikyo), 5,617
 Tocopilla, Chile, 4,699
 Truk, Caroline Islands, 4,931
 Valparaiso, Chile, 5,140
 Vancouver, Canada (via Active Pass), 812
 Vancouver, Canada (via Haro Strait), 823
 Victoria, Canada, 745

Vladivostok, U.S.S.R. (via La Perouse Strait and Proliv Kruzenshterna), 4,563
 Vladivostok, U.S.S.R. (via La Perouse Strait, Proliv Chetvertyy Kuril'skiy, and Unimak Pass), 4,570
 Wake Island, 3,821
 Wei-hai-wei, China (via Tsugaru Kaikyo), 5,402
 Wellington, New Zealand, 5,900
 Wonsan, Korea, 4,866
 Yokohama, Japan, 4,536

SAN JOSE, GUATEMALA

(13°55'00" N., 70°49'45" W.) to:

Junction Points*

Panama, Panama, 886
 Punta Arenas, Chile, 4,296

Ports

Acapulco, Mexico, 574
 Amapala, Honduras, 204
 Antofagasta, Chile, 2,557
 Arica, Chile, 2,338
 Callao, Peru, 1,763
 Coquimbo, Chile, 2,864
 Corinto, Nicaragua, 238
 Esmeraldas, Ecuador, 1,016
 Guayaquil, Ecuador, 1,242
 Guaymas, Mexico, 1,520
 Hilo, Hawaii, U.S.A., 3,690
 Iquique, Chile, 2,404
 La Libertad, Mexico, 1,684
 Los Angeles, California, U.S.A., 2,054
 Lota, Chile, 3,220
 Manzanillo, Mexico, 840
 Mazatlan, Mexico, 1,149
 Mollendo, Peru, 2,213
 Monterey, California, U.S.A., 2,315
 Pisco, Peru, 1,875
 Puntarenas, Costa Rica, 465
 San Blas, Mexico, 1,064
 San Diego, California, U.S.A., 1,993
 San Francisco, California, U.S.A., 2,395
 Santa Barbara, California, U.S.A., 2,130
 Talcahuano, Chile, 3,202
 Valparaiso, Chile, 3,024

SAN JUAN, PERU

(15°20'36" S., 75°09'36" W.) to:

Junction Points*

Panama, Panama, 1,590
 Punta Arenas, Chile, 1,660

Ports

Antofagasta, Chile, 575
 Callao, Peru, 248

*JUNCTION POINT.—See Preface for use of junction points.

SAN JUAN, PUERTO RICO

(18°27'50" N., 66°06'40" W.) to:

Junction Points*

Bishop Rock, England, 3,390
 Fastnet, Ireland (via Mona Passage), 3,299
 Inishtrahull, Ireland, 3,436
 Panama, Panama, 1,036
 Pentland Firth, Scotland (track A), 3,642
 Pentland Firth, Scotland (track B), 3,638
 Strait of Gibraltar, 3,336
 Straits of Florida, 1,017
 Yucatan Channel, 1,111

Ports

Abraham Bay, Bahamas, 476
 Angmagssalik, Greenland (direct), 3,061
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,075
 Argentia, Canada, 1,840
 Arkhangelsk, U.S.S.R., 5,001
 Bahila de Samana, Dominican Republic, 185
 Baltimore, Maryland, U.S.A., 1,374
 Barahona, Dominican Republic, 294
 Barranquilla, Colombia, 705
 Basse-Terre, Guadeloupe, 314
 Basseterre, St. Christopher, 214
 Belem, Brazil, 1,692
 Boston, Massachusetts, U.S.A., 1,486
 Bridgetown, Barbados (west of St. Croix and via Virgin Passage), 517
 Brunswick, Georgia, U.S.A., 1,132
 Buenos Aires, Argentina, 4,753
 Cadiz, Spain, 3,312
 Caldera Bay, Dominican Republic, 273
 Cape Haitien, Haiti, 372
 Cape Town, Republic of South Africa, 5,772
 Cardenas, Cuba, 917
 Cartagena, Colombia, 782
 Castries, St. Lucia (via Virgin Passage and west of St. Croix), 418
 Catia la Mar, Venezuela, 556
 Charleston, South Carolina, U.S.A., 1,138
 Christiansted, St. Croix, 104
 Cienfuegos, Cuba (north of Hispaniola), 903
 Cienfuegos, Cuba (south of Hispaniola), 930
 Cockburn Town, Bahamas, 611
 Colon, Panama, 993
 Dakar, Senegal, 2,812
 Elizabeth Harbor, Bahamas, 642
 Exuma Harbor, Bahamas, 647
 Fernandina, Florida, U.S.A., 1,115
 Fort de France, Martinique, 385

Fort Liberte, Haiti, 373
 Freetown, Sierra Leone, 3,141
 Funchal, Madeira Island, 2,773
 Georgetown, British Guiana, 876
 Great Harbor, Culebra Island, 58
 Guantanamo, Cuba (via north of Hispaniola), 537
 Habana, Cuba, 978
 Haina, Dominican Republic, 249
 Halifax, Canada, 1,580
 Hamilton, Bermuda, 856
 Hopetown, Bahamas, 802
 Horta, Azores, 2,294
 Ivigtut, Greenland, 2,720
 Jacksonville, Florida, U.S.A., 1,121
 Key West, Florida, U.S.A., 966
 Kingston, Jamaica (north of Hispaniola), 685
 Kingston, Jamaica (south of Hispaniola), 643
 La Coruna, Spain, 3,255
 La Guaira, Venezuela, 506
 La Romana, Dominican Republic, 191
 Limon, Costa Rica, 1,119
 Lisboa, Portugal, 3,185
 Liverpool, Canada, 1,540
 Manzanillo, Cuba, 738
 Mariel, Cuba, 999
 Matanzas, Cuba, 931
 Miami, Florida, U.S.A., 960
 Miller Anchorage, Bahamas, 714
 Miragoane, Haiti, 526
 Nassau, Bahamas, 799
 New York, New York, U.S.A., 1,399
 Nicaro Lengua de Pajaro, Cuba, 561
 Norfolk, Virginia, U.S.A., 1,252
 Nuevitas, Cuba, 663
 Oranjestad, St. Eustatius, 195
 Philadelphia, Pennsylvania, U.S.A., 1,395
 Pina, Panama, 1,219
 Pointe a Pitre, Guadeloupe, 333
 Ponce, Puerto Rico, 1,180
 Ponta Delgada, Azores, 2,412
 Port au Prince, Haiti, 552
 Port de Paix, Haiti, 398
 Port of Spain, Trinidad, 574
 Portland, Maine, U.S.A., 1,531
 Portsmouth, New Hampshire, U.S.A., 1,507
 Puerto Cayo Moa, Cuba, 533
 Puerto Cortes, Honduras, 1,284
 Puerto Manati, Cuba, 639
 Puerto Padre, Cuba, 625
 Puerto Tanamo, Cuba, 549
 Puerto Vita, Cuba, 592
 Recife, Brazil (via outside all islands), 2,609
 Rio de Janeiro, Brazil, 3,652
 Rio Yateras, Cuba, 525
 St. John, Canada, 1,614

St. Johns, Antigua, 265
 St. Pierre, Martinique, 374
 San Pedro de Macoris, Dominican Republic, 199
 Santa Barbara de Samana, Dominican Republic, 190
 Santa Cruz de Tenerife, Canary Islands, 2,820
 Santa Lucia, Cuba, 1,079
 Santiago de Cuba, Cuba (north of Hispaniola and via Windward Passage), 584
 Santiago de Cuba, Cuba (south of Hispaniola), 637
 Santo Domingo, Dominican Republic, 232
 Savannah, Georgia, U.S.A., 1,153
 Sydney, Canada, 1,728
 Tela, Honduras, 1,258
 Veracruz, Mexico, 1,780
 Vigo, Spain, 3,228
 Willemstad, Curacao, 485
 Wilmington, North Carolina, U.S.A., 1,153
 Yarmouth, Canada, 1,527

SAN JUAN, BAUTISTA BAY. See Islas Juan Fernandez.

SAN JUAN DEL NORTE, NICARAGUA

(10°57'00" N., 83°43'00" W.) to:

Junction Points*

Montreal, Canada (via Crooked Island Passage and Strait of Canso), 3,220
 Panama, Panama, 289
 Yucatan Channel, 681

Ports

Alvaro Obregon, Mexico, 1,165
 Belize, British Honduras, 619
 Cartagena, Colombia, 495
 Castries, St. Lucia, 1,344
 Charlotte Amalie, Virgin Islands, 1,199
 Galveston, Texas, U.S.A., 1,344
 Gulfport, Mississippi, U.S.A., 1,237
 Habana, Cuba, 871
 La Guaira, Venezuela, 1,026
 Mobile, Alabama, U.S.A., 1,240
 New Orleans, Louisiana, U.S.A., 1,262
 New York, New York, U.S.A. (via Crooked Island Passage and Windward Passage), 2,032
 Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,837
 Philadelphia, Pennsylvania, U.S.A. (via Windward Passage and Crooked Island Passage), 2,004

*JUNCTION POINT.—See Preface for use of junction points.

Pointe a Pitre, Guadeloupe, 1,345
 Port au Prince, Haiti, 840
 Port of Spain, Trinidad, 1,342
 Santo Domingo, Dominican Republic, 924
 Tampico, Mexico, 1,336
 Veracruz, Mexico, 1,271
 Willemstad, Curacao, 882

SAN JUAN DEL SUR, NICARAGUA
 (11°15'15" N., 85°53'10" W.) to:

Junction Points*
 Panama, Panama, 590

Ports
 La Libertad, El Salvador, 239
 La Libertad, Mexico, 2,000
 Puntarenas, Costa Rica, 171
 Salina Cruz, Mexico, 619

SAN LORENZO, HONDURAS
 (13°25'00" N., 87°25'00" W.) to:

Junction Points*
 Panama, Panama, 762

Ports
 Acapulco, Mexico, 791
 Callao, Peru, 1,701

SAN PEDRO, CALIFORNIA, U.S.A.
 See Los Angeles.

SAN PEDRO DE MACORIS, DOMINICAN REPUBLIC
 (18°26'45" N., 69°18'20" W.) to:

Ports
 Kingston, Jamaica, 461
 Port au Prince, Haiti, 473
 Romana, Dominican Republic, 21
 San Juan, Puerto Rico, 199
 Sanchez, Dominican Republic, 184

SAN SEBASTIAN, SPAIN
 (43°19'00" N., 1°59'30" W.) to:

Junction Points*
 Strait of Gibraltar, 892
 Ushant, France, 353

Ports
 Bordeaux, France, 210
 El Ferrol del Caudillo, Spain, 302
 Horta, Azores, 957

SANCHEZ, DOMINICAN REPUBLIC
 (19°13'00" N., 69°36'00" W.) to:

Junction Points*
 Panama, Panama, 1,024
 Straits of Florida, 873

Ports
 Colon, Panama, 980
 New York, New York, U.S.A., 1,350
 Port Plata, Dominican Republic, 128
 San Pedro de Macoris, Dominican Republic, 184
 Santo Domingo, Dominican Republic, 220

SAND BAY, GREAT SITKIN ISLAND, ALASKA, U.S.A.
 (51°59'40" N., 176°06'00" W.) to:

Junction Points*
 Panama, Panama, 5,569

Ports
 Dutch Harbor, Alaska, U.S.A., 397
 Honolulu, Hawaii, U.S.A., 1,928
 Victoria, Canada, 2,027

SANDAKAN, NORTH BORNEO
 (5°50'00" N., 118°07'00" E.) to:

Junction Points*
 Singapore, 1,071

Ports
 Honolulu, Hawaii, U.S.A., 5,044
 Jolo, Philippines, 180
 Victoria, North Borneo, 412
 Zamboanaga, Philippines, 251

SANDEFJORD, NORWAY
 (59°07'25" N., 10°13'50" E.) to:

Junction Points*
 Pentland Firth, Scotland, 518

Ports
 Bergen, Norway, 317
 Bremerhaven, Germany, 373
 London, England, 610

SANDNES, NORWAY
 (58°51'12" N., 5°44'50" E.)

Add 8 miles to Stavanger distances.

SANGLEY POINT, CAVITE HARBOR, MANILA BAY, PHILIPPINES
 (14°30'00" N., 120°55'00" E.)

Subtract 5 miles from Manila distances.

SAN-MEN WAN, CHINA
 (29°03'00" N., 121°45'00" E.) to:

Ports
 Chi-lung Chiang, Taiwan, 248
 Ching-tao, China, 528
 Hong Kong, B.C.C., 650
 Inchon, Korea, 628
 Nagoya, Japan, 143
 Shang-hai, China, 270

SANT ANTIOCO PONTI, SARDINIA
 (39°03'12" N., 8°28'12" E.) to:

Junction Points*
 Port Said, U.A.R., 1,282
 Strait of Gibraltar, 715

Ports
 Bizerte, Tunisia, 132
 Nice, France, 310
 Palma, Balearic Islands, 298

SAN ANNA BAY, CURACAO. See Willemstad.

SANTA BARBARA, CALIFORNIA, U.S.A.
 (34°24'00" N., 119°41'00" W.) to:

Junction Points*
 Panama, Panama, 2,980
 Punta Arenas, Chile, 5,938

Ports
 Acapulco, Mexico, 1,568
 Antofagasta, Chile, 4,497
 Arica, Chile, 4,286
 Callao, Peru, 3,722
 Coquimbo, Chile, 4,742
 Corinto, Nicaragua, 2,348
 Corral, Chile, 5,144
 Esmeraldas, Ecuador, 3,077
 Guayaquil, Ecuador, 3,249
 Guaymas, Mexico, 1,225
 Iquique, Chile, 4,355
 Lota, Chile, 5,018
 Mollendo, Peru, 4,161
 Pisco, Peru, 3,832
 Puntarenas, Costa Rica, 2,566
 Salina Cruz, Mexico, 1,870
 San Blas, Mexico, 1,152
 San Jose, Guatemala, 2,130
 Talcahuano, Chile, 5,006
 Valparaiso, Chile, 4,875

*JUNCTION POINT.—See Preface for use of junction points.

**SAN BARBARA DE SAMANA,
DOMINICAN REPUBLIC**
(19°12'15" N., 69°19'30" W.) to:

Junction Points*
Panama, Panama, 1,007
Straits of Florida, 867

Ports
Bridgetown, Barbados, 675
Charlotte Amalie, Virgin Islands, 261
Christiansted, St. Croix, 289
Great Harbor, Culebra Island, 242
Key West, Florida, U.S.A. (via Old
Bahama Channel), 811
New York, New York, U.S.A., 1,334
Porlamar, Venezuela, 610
San Juan, Puerto Rico, 190

**SANTA CRUZ DE TENERIFE,
CANARY ISLANDS**
(28°38'00" N., 16°14'00" W.) to:

Junction Points*
Bishop Rock, England, 1,356
Cape of Good Hope, Republic of South
Africa, 4,453
Inishtrahull, Ireland, 1,704
Montreal, Canada (direct), 3,011
Montreal, Canada (tracks C and D),
3,035
Montreal, Canada (track E), 3,015
Pentland Firth, Scotland, 1,952
Punta Arenas, Chile, 5,690
Strait of Gibraltar, 697
Straits of Florida, 3,614
Ushant, France, 1,320

Ports
Belem, Brazil, 2,599
Bordeaux, France, 1,406
Boston, Massachusetts, U.S.A., 2,777
Buenos Aires, Argentina, 4,619
Cadiz, Spain, 702
Cape Town, Republic of South Africa,
4,435
Casablanca, Morocco, 548
Charleston, South Carolina, U.S.A.,
3,275
Charlotte Amalie, Virgin Islands,
2,764
Colon, Panama, 3,776
Dakar, Senegal, 846
Freetown, Sierra Leone, 1,342
Funchal, Maderia Island, 258
Guantanamo, Cuba, 3,265
Halifax, Canada (direct) 2,462
Halifax, Canada (tracks C and D),
2,478
Horta, Azores, 881

Huelva, Spain, 715
Lisboa, Portugal, 714
Miami, Florida, U.S.A., 3,427
New York, New York, U.S.A., 2,936
Norfolk, Virginia, U.S.A., 3,057
Philadelphia, Pennsylvania, U.S.A.,
3,062
Port of Spain, Trinidad, 2,804
Porto, Portugal, 849
Porto Grande, Sao Vicente, Cape
Verde Islands, 849
Rio de Janeiro, Brazil, 3,518
St. John's, Canada, 2,053
San Juan, Puerto Rico, 2,820
Takoradi, Ghana, 2,119
Vigo, Spain, 909

SANTA CRUZ DEL SUR, CUBA
(20°40'00" N., 77°59'00" W.) to:

Junction Points*
Panama, Panama, 731
Yucatan Channel, 416

Ports
Guantanamo, Cuba, 222
Habana, Cuba, 542
Montego Bay, Jamaica, 134

SANTA FE, ARGENTINA
(31°39'00" S., 60°42'00" W.)

Add 258 miles to Buenos Aires dis-
tances.

SANTA ISABEL, FERNANDO POO
(3°45'30" N., 8°46'30" E.) to:

Ports
Boma, Republic of the Congo, 689
Clarence Bay, Ascension Island, 1,561
Kribi, Cameroon, 106
Lagos, Nigeria, 384
Lome, Togo, 480
St. Helena Island, 1,472

SANTA LUCIA, CUBA
(22°42'00" N., 83°58'30" W.) to:

Junction Points*
Straits of Florida, 120
Yucatan Channel, 99

Ports
Kingston, Jamaica, 651
Nuevitas, Cuba, 447
San Juan, Puerto Rico, 1,079

SANTA MARIA, CUBA
(21°17'00" N., 78°34'00" W.) to:

Junction Points*
Panama, Panama, 814
Yucatan Channel, 381
Philadelphia, Pennsylvania, U.S.A.
(via Windward Passage and
Crooked Island Passage), 1,755
Savannah, Georgia, U.S.A. (via Wind-
ward Passage and Crooked Island
Passage), 1,372
Santo Domingo, Dominican Republic,
504
Veracruz, Mexico, 1,537

SANTA ROSALIA, MEXICO
(27°20'00" N., 112°16'00" W.) to:

Junction Points*
Panama, Panama, 2,390

Ports
Acapulco, Mexico, 976
Los Angeles, California, U.S.A., 1,192

SANTANDER, SPAIN
(43°27'30" N., 3°48'00" W.) to:

Junction Points*
Ushant, France, 323

Ports
Barranquilla, Colombia, 753
Cienfuegos, Cuba, 149
Santiago de Cuba, Cuba, 300

SANTA MARTA, COLOMBIA
(11°15'00" N., 74°13'00" W.) to:

Junction Points*
Yucatan Channel, 892

Ports
Baltimore, Maryland, U.S.A. (via
Windward Passage and Crooked
Island Passage), 1,710
Boston, Massachusetts, U.S.A. (via
Windward Passage and Crooked
Island Passage), 1,966
Charleston, South Carolina, U.S.A.
(via Windward Passage and Crook-
ed Island Passage), 1,373
Colon, Panama, 365
Galveston, Texas, U.S.A., 1,588
New York, New York, U.S.A. (via
Windward Passage and Crooked
Island Passage), 1,783

*JUNCTION POINT.—See Preface for use of junction points.

Norfolk, Virginia, U.S.A. (via Windward Passage and Crooked Island Passage), 1,588

Ports

Cadiz, Spain, 789
Horta, Azores, 1,090
La Coruna, Spain, 224
La Pallice, France, 201

SANTIAGO, CUBA. See Santiago de Cuba.

SANTIAGO DE CUBA, CUBA
(20°01'00'' N., 75°50'15'' W.) to:

Junction Points*

Panama, Panama, 726
Straits of Florida (via Windward Passage), 676
Yucatan Channel, 548

Ports

Amuay, Venezuela, 600
Baltimore, Maryland, U.S.A., 1,289
Barcelona, Venezuela, 936
Barranquilla, Colombia, 549
Boston, Massachusetts, U.S.A. (via Nantucket Light Vessel), 1,545
Brunswick, Georgia, U.S.A., 926
Carupano, Venezuela, 1,009
Casilda, Cuba, 288
Charleston, South Carolina, U.S.A. (via Crooked Island Passage and Windward Passage), 952
Cinefuegos, Cuba, 334
Colon, Panama, 683
Fort de France, Martinique, 951
Guanica, Puerto Rico (via north of Hispaniola), 572
Guanica, Puerto Rico (via south of Hispaniola), 584
Habana, Cuba, 650
Halifax, Canada, 1,683
Hamilton, Bermuda, 1,031
Jacksonville, Florida, U.S.A. (via Windward Passage), 904
Key West, Florida, U.S.A. (via Windward Passage), 637
Kingston, Jamaica, 176
Manzanillo, Cuba, 168
Miami, Florida, U.S.A., 630
Montego Bay, Jamaica, 154
Nassau, Bahamas, 566
New York, New York, U.S.A., 1,362
Norfolk, Virginia, U.S.A., 1,167
Philadelphia, Pennsylvania, U.S.A. (via Crooked Island Passage and Windward Passage), 1,334
Ponce, Puerto Rico, 587

Port Plata, Dominican Republic, 311
Puerto Barrios, Guatemala, 792
San Juan, Puerto Rico, 584
Santa Maria, Cuba, 300
Santo Domingo, Dominican Republic, 429
Savannah, Georgia, U.S.A. (via Crooked Island Passage and Windward Passage), 951
Surgidero de Batabano, Cuba, 580
Willemstad, Curacao, 627
Wilmington, North Carolina, U.S.A., 1,003

SANTO DOMINGO, DOMINICAN REPUBLIC
(18°28'00'' N., 69°52'30'' W.) to:

Junction Points*

Bishop Rock, England, 3,585
Fastnet, Ireland, 3,491
Inishtrahull, Ireland (track A), 3,621
Montreal, Canada (via Cabot Strait), 2,579
Panama, Panama, 846
Pentland Firth, Scotland (track A), 3,827
Pentland Firth, Scotland (track B), 3,820
Strait of Gibraltar, 3,549
Straits of Florida (via Windward Passage), 986
Straits of Florida (via Mona Passage), 1,036
Yucatan Channel, 929

Ports

Alvaro Obregon, Mexico, 1,472
Baltimore, Maryland, U.S.A., 1,451
Barranquilla, Colombia, 538
Belem, Brazil, 1,866
Belize, British Honduras, 1,088
Boston, Massachusetts, U.S.A., 1,599
Brunswick, Georgia, U.S.A., 1,179
Buenos Aires, Argentina, 4,929
Campeche, Mexico, 1,364
Cap Haitien, Haiti, 392
Cape Town, Republic of South Africa, 5,948
Cardenas, Cuba, 887
Carmen, Mexico, 1,437
Cartagena, Colombia, 610
Castries, St. Lucia, 578
Charleston, South Carolina, U.S.A., 1,190
Charlotte Amalie, Virgin Islands, 300
Cienfuegos, Cuba, 716
Colon, Panama, 802
Dakar, Senegal, 3,036
Great Harbor, Culebra Island, 290

Guantanamo, Cuba, 397
Habana, Cuba (via Windward Passage), 946
Halifax, Canada, 1,709
Hamilton, Bermuda, 992
Jacksonville, Florida, U.S.A., 1,166
Jeremie, Haiti, 343
Key West Florida, U.S.A. (via Old Bahama Channel and Windward Passage), 936
Kingston, Jamaica, 430
La Guaira, Venezuela, 502
Manzanillo, Cuba, 558
Maracaibo, Venezuela, 496
Matanzas, Cuba, 901
Miami, Florida, 930
Miragoane, Haiti, 407
Nassau, Bahamas, 851
New York, New York, U.S.A., 1,489
Norfolk, Virginia, U.S.A., 1,329
Nuevitas, Cuba, 632
Philadelphia, Pennsylvania, U.S.A. (via Mona Passage), 1,480
Pointe a Pitre, Gaudeloupe, 520
Ponce, Puerto Rico, 196
Ponta Delgada, Azores, 2,620
Port au Prince, Haiti, 453
Port of Spain, Trinidad, 681
Port Plata, Dominican Republic, 295
Puerto Cabello, Venezuela, 492
Puerto Colombia, Colombia, 542
Rio de Janeiro, Brazil, 3,829
Romana, Dominican Republic, 61
St. John, Canada, 1,733
San Juan, Puerto Rico, 232
San Juan del Norte, Nicaragua, 924
Sanchez, Dominican Republic, 220
Santa Marta, Colombia, 504
Santiago de Cuba, Cuba, 429
Savannah, Georgia, U.S.A., 1,204
Sydney, Canada, 1,867
Tuxpan, Mexico, 1,624
Veracruz, Mexico, 1,596
Willemstad, Curacao, 397
Wilmington, North Carolina, U.S.A., 1,210

SANTOS, BRAZIL

(23°56'00'' S., 46°19'00'' W.) to:

Junction Points*

Montreal, Canada, 5,544
Panama, Panama, 4,609
Strait of Gibraltar, 4,378
Straits of Florida, 4,799
Ushant, France, 5,002

Ports

Bahia Blanca, Argentina, 1,292
Baltimore, Maryland, U.S.A., 5,031

*JUNCTION POINT.—See Preface for use of junction points.

Boston, Massachusetts, U.S.A., 4,928
 Buenos Aires, Argentina, 1,006
 Cape Town, Republic of South Africa, 3,409
 Charleston, South Carolina, U.S.A., 4,908
 Colon, Panama, 4,476
 Fernando de Noronha, 2,405
 Guiria, Venezuela, 3,467
 Maldonado, Uruguay, 1,172
 Mar del Plata, Argentina, 1,363
 Montevideo, Uruguay, 893
 New York, New York, U.S.A., 4,957
 Norfolk, Virginia, U.S.A., 4,910
 Paranagua, Brazil, 163
 Philadelphia, Pennsylvania, U.S.A., 5,004
 Portland, Maine, U.S.A., 4,959
 Porto Alegre, Brazil, 758
 Quequen, Argentina, 1,437
 Rio Grande, Brazil, 586
 Savannah, Georgia, U.S.A., 4,940

SAN-YA CHIANG, CHINA

(18°14'00" N., 109°26'00" E.) to:

Ports

Haiphong, Vietnam, 253
 Hong Kong, B.C.C., 391
 Kao-hsiung Chiang, Taiwan, 682
 Manila, Philippines, 714
 Sai Gon, Vietnam, 624

SAO LUIZ, BRAZIL

(2°30'00" S., 44°20'00" W.) to:

Ports

Baltimore, Maryland, U.S.A., 3,117
 Belem, Brazil, 372
 Fortaleza, Brazil, 392
 New York, New York, U.S.A., 3,076

SAO SALVADOR, BRAZIL. See Salvador.

SAO TOME, SAO TOME, GULF OF GUINEA

(0°21'00" N., 6°45'00" E.) to:

Ports

Boma, Republic of the Congo, 563
 Douala, Cameroon, 285
 Lagos, Nigeria, 422
 Pointe Noire, Gabon, 436
 Porto Grande, Cape Verde Islands, 2,208

SARANDE, ALBANIA

(39°52'00" N., 20°00'30" E.) to:

Junction Points*

Port Said, U.A.R., 863
 Strait of Gibraltar, 1,311

Ports

Piraeus, Greece (via Corinth Canal), 253
 Split, Yugoslavia, 293
 Taranto, Italy, 154

SARAWAK. See Kuching.

SASEBO, JAPAN

(33°09'00" N., 129°43'00" E.) to:

Ports

Acapulco, Mexico (via Osumi Kaikyo), 6,918
 Dutch Harbor, Alaska, U.S.A. (via Osumi Kaikyo), 3,207
 Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,009
 Itozaki, Japan, 271
 Kunsan, Japan, 343
 Manila, Philippines, 1,349
 Nome, Alaska, U.S.A. (via Osumi Kaikyo), 3,373
 San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,185
 Valparaiso, Chile (via Osumi Kaikyo), 9,836
 Wakamatsu, Japan, 136

SASSANDRA, IVORY COAST

(4°57'00" N., 6°04'00" W.) to:

Ports

Dakar, Senegal, 1,080
 Douala, Cameroon, 930
 Freetown, Sierra Leone, 582
 Lagos, Nigeria, 577
 Monrovia, Liberia, 342
 Takoradi, Ghana, 262

SASSNITZ, GERMANY

(54°30'00" N., 13°38'15" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 143
 Skagens Odde, Denmark, 239

Ports

Gdynia, Poland, 203
 Kopenhagen, Denmark, 95
 Stockholm, Sweden, 390

SAVANNAH, GEORGIA, U.S.A.

(32°05'00" N., 81°06'00" W.) to:

Junction Points*

Montreal, Canada (via Strait of Can-
 so), 2,013
 Panama, Panama, 1,606
 Pentland Firth, Scotland (track A), 3,760
 Pentland Firth, Scotland (track B), 3,714
 Pentland Firth, Scotland (track C), 3,613
 Punta Arenas, Chile, 6,930
 Straits of Florida, 603

Ports

Banes, Cuba (via Crooked Island Pas-
 sage and Windward Passage), 801
 Bocas del Toro, Panama (via Crooked
 Island Passage and Windward Pas-
 sage), 1,637
 Bridgetown, Barbados, 1,646
 Buenos Aires, Argentina (via north of
 English Bank), 5,854
 Cape Town, Republic of South Africa, 6,864
 Cartagena, Colombia (via Crooked
 Island Passage and Windward Pas-
 sage), 1,442
 Castries, St. Lucia, 1,548
 Charlotte Amalie, Virgin Islands, 1,210
 Charlottetown, Canada, 1,386
 Colon, Panama, 1,563
 Habana, Cuba, 606
 Halifax, Canada, 1,164
 Kingston, Jamaica (via Crooked Is-
 land Passage and Windward Pas-
 sage), 1,063
 La Guaira, Venezuela (via Mona Pas-
 sage), 1,575
 Las Palmas de Gran Canaria, Canary
 Islands, 3,409
 Limon, Costa Rica (via Crooked Island
 Passage and Windward Passage), 1,636
 Maracaibo, Venezuela, 1,466
 Montevideo, Uruguay, 5,740
 Nassau, Bahamas, 503
 Ponce, Puerto Rico, 1,180
 Port Antonio, Jamaica (via Crooked
 Island Passage and Windward Pas-
 sage), 1,012
 Port of Spain, Trinidad, 1,714
 Porto Grande, Cape Verde Islands, 3,169
 Puerto Barrios, Guatemala (via
 Straits of Florida), 1,224
 Puerto Cortes, Honduras (via Straits
 of Florida), 1,189
 Recife, Brazil, 3,681
 Rio de Janeiro, Brazil, 4,753

*JUNCTION POINT.—See Preface for use of junction points.

St. John, Canada (via Nantucket Light Vessel), 1,113
 Salvador, Brazil, 4,072
 San Juan, Puerto Rico, 1,153
 Santa Marta, Colombia (via Crooked Island Passage and Windward Passage), 1,372
 Santiago de Cuba, Cuba (via Crooked Island Passage and Windward Passage), 951
 Santo Domingo, Dominican Republic, 1,204
 Santos, Brazil, 4,940
 Tampico, Mexico, 1,432
 Willemstad, Curacao, 1,444

SAVONA, ITALY

(44°18'44" N., 8°29'29" E.) to:

Junction Points*

Port Said, U.A.R., 1,437
 Strait of Gibraltar, 852

Ports

Alexandria, U.A.R., 1,326
 Alger, Algeria, 518
 Alicante, Spain, 549
 Ancona, Italy, 1,028
 Annaba, Algeria, 451
 Banghazi, Libya, 922
 Barcelona, Spain, 341
 Bari, Italy, 820
 Bayrut, Lebanon, 1,519
 Bizerte, Tunisia, 440
 Brindisi, Italy, 762
 Cagliari, Sardinia, 362
 Cartagena, Spain, 601
 Ceuta, Morocco, 834
 Gibraltar, 835
 Haifa, Israel, 1,515
 Iraklion, Crete, 1,002
 Istanbul, Turkey (via Corinth Canal), 1,260
 Istanbul, Turkey (south of Greece), 1,301
 Izmir, Turkey (via Corinth Canal), 1,106
 Izmir, Turkey (south of Greece), 1,147
 Malaga, Spain, 783
 Marseille, France, 189
 Messina, Sicily, 496
 Napoli, Italy, 350
 Odessa, U.S.S.R. (via Corinth Canal), 1,608
 Odessa, U.S.S.R. (south of Greece), 1,650
 Oran, Algeria, 672
 Palermo, Sicily, 434
 Palma, Balearic Islands, 433

Piraeus, Greece (via Corinth Canal), 906
 Piraeus, Greece (south of Greece), 988
 Rijeka, Yugoslavia, 1,095
 Sibenik, Yugoslavia, 969
 Siracusa, Sicily, 567
 Split, Yugoslavia, 954
 Tarabulus, Libya, 722
 Taranto, Italy, 715
 Thessaloniki, Greece (via Corinth Canal), 1,154
 Thessaloniki, Greece (south of Greece), 1,196
 Toulon, France, 156
 Trieste, Free Territory, 1,128
 Tunis, Tunisia, 475
 Valencia, Spain, 497
 Valletta, Malta, 588
 Venezia, Italy, 1,138
 Volos, Greece (via Corinth Canal), 1,096
 Volos, Greece (south of Greece), 1,137

SAWARIN, SUDAN. See Suakin.

SAYDA, LEBANON

(33°32'02" N., 35°19'49" E.) to:

Junction Points*

Port Said, U.A.R., 205
 Strait of Gibraltar, 2,035

Ports

Haifa, Israel, 49
 Marseille, France, 1,596
 Sete, France, 1,655
 Venezia, Italy (via Corinth Canal), 1,354
 Venezia, Italy (south of Greece), 1,382

SCORESBYSUND, GREENLAND

(70°28'30" N., 21°58'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 871
 Strait of Gibraltar, 2,271

Ports

Murmansk, U.S.S.R., 1,163
 Reykjavik, Iceland, 437
 St. John's, Canada, 1,643

SEAHAM HARBOR, ENGLAND

(54°50'14" N., 1°19'10" W.) to:

Junction Points*

Bishop Rock, England, 625
 Pentland Firth, Scotland, 259

Ports

Leith, Scotland, 117
 London, England, 308
 Rotterdam, Netherlands, 278

SEATTLE, WASHINGTON, U.S.A.

(47°36'00" N., 122°22'00" W.) to:

Junction Points*

Panama, Panama, 4,020
 Punta Arenas, Chile, 6,964
 Singapore, 7,062
 Wilson Promontory, Australia, 7,185

Ports

Aleksandrovsk, U.S.S.R. (via La Perouse Strait and Prolov Kruzenshтерна), 4,108
 Amapala, Honduras, 3,361
 Anchorage, Alaska, U.S.A. (via inside route), 1,639
 Anchorage, Alaska, U.S.A. (via outside route), 1,420
 Apia, Samoa, 4,613
 Apra, Guam, 4,948
 Archipelago de Colon, 3,774
 Attu Island, Alaska, U.S.A. (via Unimak Pass), 2,422
 Auckland, New Zealand, 6,170
 Avarua, Cook Islands, 4,700
 Baie du Controleur, Marquesas, 3,666
 Barrow, Alaska, U.S.A., 2,799
 Brisbane, Australia, 6,471
 Callao, Peru, 4,764
 Canton, Phoenix Islands, 4,049
 Cordova, Alaska, U.S.A., 1,216
 Darwin, Australia, 6,892
 Dutch Harbor, Alaska, U.S.A., 1,707
 Enderbury Island, Phoenix Islands, 4,047
 Funafuti, Ellice Islands, 4,640
 Guayaquil, Ecuador, 5,326
 Hakodate, Japan (south of Aleutian Islands), 3,952
 Hakodate, Japan (north of Aleutian Islands), 3,922
 Hilo, Hawaii, U.S.A., 2,388
 Hong Kong, B.C.C., 5,768
 Hong Kong, B.C.C. (low power route for April, May and October), 6,447
 Hong Kong, B.C.C. (low power route for November-March), 6,835
 Hong Kong, B.C.C. (alternate, low power route for November-March), 6,941
 Hot Springs Bay, Alaska, U.S.A., 2,139
 Hsia-men, China (via La Perouse Strait and north of Aleutians), 5,463
 Hsia-men, China (via Tsugaru Kaikyo and north of Aleutians), 5,464

*JUNCTION POINT.—See Preface for use of junction points.

Hsia-men, China (via Tsugaru Kaikyo and south of Aleutians), 5,494	Juan de Fuca), 1,232	Victoria, Canada, 70
Hsia-men, China (via Osumi Kaikyo and south of Aleutians), 5,515	Shang-hai, China (via La Perouse Strait and north of Aleutian Islands), 5,067	Vladivostok, U.S.S.R. (via Tsugaru Kaikyo and composite sailing), 4,366
Jaluit, Marshall Islands, 4,296	Shang-hai, China (low power route for April, May, and October), 5,870	Vladivostok, U.S.S.R. (north of Aleutian Islands), 4,210
Johnston Island, 3,018	Shang-hai, China (low power route for November-March), 6,270	Wake Island, 3,820
Juneau, Alaska, U.S.A., 873	Shang-hai, China (alternate route, low power for November-March), 6,401	Wei-hai-wei, China (via La Perouse Strait, north of Aleutian Islands and via Unimak Pass), 5,054
Kahului, Hawaii, U.S.A., 2,364	Shang-hai, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,071	Wei-hai-wei, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,059
Kaneohe Bay, Hawaii, U.S.A., 2,388	Shang-hai, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,101	Wei-hai-wei, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,089
Kaunakakai, Hawaii, U.S.A., 2,398	Shang-hai, China (via Osumi Kaikyo and south of Aleutian Islands), 5,220	Wellington, New Zealand, 6,433
Ketchikan, Alaska, U.S.A., 634	Shimonoseki, Japan (via Tsugaru Kaikyo and south of Aleutian Islands), 4,616	Whittier, Alaska, U.S.A., 1,241
Kobe, Japan (south of Aleutian Islands), 4,537	Shimonoseki, Japan (via Tsugaru Kaikyo and north of Aleutian Islands), 4,586	Wrangell, Alaska, U.S.A., 713
Kobe, Japan (north of Aleutian Islands), 4,527	Sitka, Alaska, U.S.A., 806	Yakutat, Alaska, U.S.A. (via outside route), 1,003
Kobe, Japan (low power, April, May, and October), 5,184	Skagway, Alaska, U.S.A., 934	Yakutat, Alaska, U.S.A. (via inside route), 1,133
Kobe, Japan (low power for November-March), 5,614	Surabaya, Indonesia, 7,162	Yokohama, Japan (composite sailing), 4,254
Kobe, Japan (alternate low power for November-March), 5,767	Suva, Fiji Islands, 5,162	Yokohama, Japan (north of Aleutian Islands), 4,245
Kodiak, Alaska, U.S.A., 1,257	Sydney, Australia, 6,810	Yokohama, Japan (low power route for April, May and October), 4,901
Levuka, Fiji Islands, 5,120	Ta-ku, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,290	Yokohama, Japan (low power route for November-March), 5,370
Manila, Philippines, 5,937	Ta-ku, China (via La Perouse Strait and north of Aleutian Islands), 5,286	Yokohama, Japan (alternate route, low power for November-March), 5,545
Manila, Philippines (low power for April, May and October via San Bernardino Strait), 6,470	Ta-ku, China (via Osumi Kaikyo and south of Aleutian Islands), 5,574	
Manila, Philippines (low power route for November-March), 6,828	Ta-ku, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,321	SEKONDI, GHANA
Manila, Philippines (alternate route, low power for November-March), 6,903	Ta-lien, China (via south of Aleutian Islands and Osumi Kaikyo), 5,415	(4°56'20" N., 1°42'00" W.) to:
Melbourne, Australia, 7,332	Ta-lien, China (via La Perouse Strait and north of Aleutian Islands), 5,127	Junction Points*
Midway Island, 2,817	Ta-lien, China (via Tsugaru Kaikyo and north of Aleutian Islands), 5,131	Ushant, France, 3,424
Nagasaki, Japan (via Tsugaru Kaikyo and south of Aleutian Islands), 4,735	Ta-lien, China (via Tsugaru Kaikyo and south of Aleutian Islands), 5,162	
Nagasaki, Japan (via Tsugaru Kaikyo and north of Aleutian Islands), 4,705	Truk, Caroline Islands, 4,929	Ports
Naknek, Alaska, U.S.A., 2,020	Unalakleet, Alaska, U.S.A., 2,023	Horta, Azores, 2,838
Nanaimo, Canada, 132	Valdez, Alaska, U.S.A., 1,229	Lagos, Nigeria, 317
New Westminster, Canada, 126	Valparaiso, Chile, 5,916	Monrovia, Liberia, 599
Nikolayevsk, U.S.S.R. (south of Aleutian Islands), 3,823	Vancouver, Canada (via Active Pass), 126	Pointe Noire, Gabon, 997
Nikolayevsk, U.S.S.R. (via Unimak Pass), 3,748	Vancouver, Canada (via Boundary Pass), 132	
Nome, Alaska, U.S.A., 2,288		SELETAR, MALAYSIA
Noumea, New Caledonia, 5,760		(1°26'00" N., 103°52'00" E.) to:
Ocean Island, 4,611		Junction Points*
Omura, Bonin Islands, 4,466		Singapore, 32
Pago Pago, American Samoa, 4,611		Sunda Strait, Indonesia, 533
Palmyra Island, 3,307		
Papeete, Society Islands, 4,296		Ports
Petersburg, Alaska, U.S.A., 771		Makasar, Celebes, 1,071
Petrovsk, U.S.S.R. (via Unimak Pass), 2,939		Manila, Philippines, 1,333
Ponape, Caroline Islands, 4,696		Sai Gon, Vietnam, 652
Prince Rupert, Canada, 577		
Rabaul, New Britain, 5,509		
Seward, Alaska, U.S.A. (via Strait of		

*JUNCTION POINT.—See Preface for use of junction points.

SELWYN BAY, SOLOMON ISLANDS
(10°15'00" S., 161°43'00" E.) to:**Junction Points***

Panama, Panama, 7,248

Ports

Apia, Samoa, 1,582
 Apra, Guam, 1,762
 Brisbane, Australia, 1,193
 Honolulu, Hawaii, U.S.A., 3,047
 Levuka, Fiji Islands, 1,154
 Noumea, New Caledonia, 850
 Ponape, Caroline Islands, 1,069
 Rabaul, New Britain, 694
 Sydney, Australia, 1,567
 Yokohama, Japan, 3,022

SEMARANG, INDONESIA

(6°56'00" S., 110°25'00" E.) to:

Junction Points*

Lombok Strait, Indonesia, 416
 Sunda Strait, Indonesia, 267
 Wetar Passage, Indonesia, 1,067

Ports

Apra, Guam, 2,464
 Djakarta, Indonesia, 236
 Makasar, Celebes, 596
 Surabaya, Indonesia, 196

SETE, FRANCE

(43°24'05" N., 3°42'07" E.) to:

Junction Points*

Port Said, U.A.R., 1,577
 Strait of Gibraltar, 684

Ports

Augusta, Sicily, 703
 Cagliari, Sardinia, 402
 Cannes, France, 171
 Genova, Italy, 266
 Iskenderun, Turkey, 1,675
 Istanbul, Turkey (via Corinth Canal), 1,401
 Istanbul, Turkey (south of Greece), 1,442
 Jaffa, Israel, 1,662
 Kerch, U.S.S.R. (via Corinth Canal), 1,836
 Kerch, U.S.S.R. (south of Greece), 1,877
 Larnaca, Cyprus, 1,579
 Livarno, Italy, 298
 Messina, Sicily, 636
 Napoli, Italy, 515
 Pula, Yugoslavia, 1,216
 Sayda, Lebanon, 1,655

Skikda, Algeria, 422
 Tarabulus, Lebanon, 1,672
 Valletta, Malta, 694

SETUBAL, PORTUGAL

(38°31'00" N., 8°59'00" E.) to:

Junction Points*

Strait of Gibraltar, 287
 Ushant, France, 672

Ports

Bilbao, Spain, 612
 Casablanca, Morocco, 313
 Horta, Azores, 939

SEVASTOPOL, U.S.S.R.

(44°36'46" N., 33°31'58" E.) to:

Junction Points*

Port Said, U.A.R., 1,105
 Strait of Gibraltar (via Corinth Canal), 2,105
 Strait of Gibraltar (south of Greece), 2,122

Ports

Constanta, Rumania, 212
 Istanbul, Turkey, 305
 Izmir, Turkey, 594
 Odessa, U.S.S.R., 167
 Split, Yugoslavia (via Corinth Canal), 1,188
 Split, Yugoslavia (south of Greece), 1,287

SEVEROMORSK, U.S.S.R.

(69°05'30" N., 33°25'00" E.)

Subtract 13 miles from Murmansk distances.

SEVERODVINSK, U.S.S.R.

(64°35'00" N., 39°50'00" E.)

Add 2¼ miles to Arkhangelsk distances.

SEWARD, ALASKA, U.S.A.

(60°06'00" N., 149°26'00" W.) to:

Junction Points*

Panama, Panama, 4,916
 Punta Arenas, Chile, 7,859

Ports

Apra, Guam, 4,079
 Auckland, New Zealand, 6,093

Callao, Peru, 5,660

Hakodate, Japan (south of Aleutian Islands), 3,010

Hong Kong, B.C.C. (south of Aleutian Islands), 4,809

Honolulu, Hawaii, U.S.A., 2,373

Los Angeles, California, U.S.A., 2,045

Manila, Philippines (south of Aleutian Islands), 4,996

Pago Pago, American Samoa, 4,589

Papeete, Society Islands, 4,661

Petropavlovsk, U.S.S.R. (via Unimak Pass), 2,065

Prince Rupert, Canada, 734

San Francisco, California, U.S.A., 1,701

Seattle, Washington, U.S.A. (via Strait of Juan de Fuca), 1,232

Seattle, Washington, U.S.A. (via inside route), 1,428

Suva, Fiji Islands, 5,003

Sydney, Australia, 6,373

Valdez, Alaska, U.S.A., 145

Valparaiso, Chile, 6,812

Vancouver, Canada, 1,249

Yakutat, Alaska, U.S.A., 312

Yokohama, Japan (south of Aleutian Islands), 3,313

SEYDHISFJORDHUR, ICELAND

(65°15'06" N., 14°00'12" W.) to:

Junction Points*

Pentland Firth, Scotland, 500
 Strait of Gibraltar, 1,899

Ports

Bergen, Norway, 634
 Murmansk, U.S.S.R., 1,173
 St. John's, Canada, 1,690

SFAX, TUNISIA

(34°43'39" N., 10°46'30" E.) to:

Junction Points*

Port Said, U.A.R., 1,131
 Strait of Gibraltar, 1,043

Ports

Almeria, Spain, 881
 Civitavecchia, Italy, 520
 Derince, Turkey, 1,081
 Gibraltar, 1,026
 Iskenderun, Turkey, 1,282
 Larnaca, Cyprus, 1,163
 Rostov-na-Donu, U.S.S.R., 1,684

SHANA, JAPAN. See Jana.

*JUNCTION POINT.—See Preface for use of junction points.

SHANG-HAI, CHINA

(31°14'00" N., 121°29'30" E.) to:

Junction Points*

Lombok Strait (via Pai-chieh Hsia, Steep Island Pass, east of Taiwan, Mindoro Strait and Sibutu Passage), 2,577
 Panama, Panama (via Tsugaru Kaikyo), 8,566
 Panama, Panama (via Osumi Kaikyo), 8,648
 Punta Arenas, Chile, 9,827
 Singapore, 2,207
 Sunda Strait (via Pai-chieh Hsia, Steep Island Pass, West of Maccllesfield Bank, east of South Natuna Island, and through Selat Gaspar), 2,535
 Wetar Passage, Indonesia, 2,553

Ports

Aleksandrovsk, Sakhalin, U.S.S.R., 1,597
 Apia, Samoa, 4,715
 Apra, Guam, 1,687
 Auckland, New Zealand (via west of New Ireland), 5,148
 Avarua, Cook Islands, 5,533
 Brisbane, Australia, 4,243
 Cebu, Philippines (via South Channel, Pai-chieh Hsia, Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,322
 Chimu Wan, Ryukyu Islands, 527
 Ching-tao, China (via outside islands), 401
 Chin-huang-tao, China (via outside islands), 668
 Chi-lung Chiang, Taiwan, 447
 Chinnampo, Korea, 561
 Darwin, Australia, 2,804
 Djakarta, Indonesia, 2,522
 Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 3,377
 Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,375
 Guayaquil, Ecuador, 8,872
 Hai-kou, Hai-nan Tao (north of Taiwan), 1,132
 Haiphong, Vietnam (via Pai-chieh Hsia, Steep Island Pass and Hainan Strait), 1,285
 Hakodate, Japan, 1,166
 Han-kou, China, 592
 Higashi-Iwase, Japan, 966
 Hong Kong, B.C.C. (via Pai-chieh Hsia, Steep Island Pass, and Formosa Strait), 831
 Honolulu, Hawaii, U.S.A., 4,336
 Hsia-men, China (via outside islands), 603

Hua-lien Chiang, Taiwan, 533
 Hu-lu Tao, China, 685
 Iloilo, Philippines (via South Channel, Pai-chieh Hsia, Steep Island Pass, east of Taiwan, and San Bernardino Strait), 1,343
 Inchon, Korea (via South Channel), 503
 Jaluit, Marshall Islands, 3,138
 Kobe, Japan (via Osumi Kaikyo), 826
 Kobe, Japan (via Inland Sea), 789
 Kodiak, Alaska, U.S.A., 3,967
 Kunsan, Japan, 457
 Kuang-chou, China (via Steep Island Pass), 923
 Levuka, Fiji Islands, 4,528
 Lien-yun, China, 414
 Lo-hsing-ta Mao-ti, China (via South Channel Pai-chieh Hsia, Steep Island Pass), 440
 Los Angeles, California, U.S.A. (via Tsugaru Kaikyo), 5,699
 Los Angeles, California, U.S.A. (via Osumi Kaikyo), 5,810
 Lu-shun, China (via South Channel), 558
 Macau, China, 903
 Maizuru, Japan, 800
 Manila, Philippines (east of Taiwan), 1,156
 Manila, Philippines (via Formosa Strait), 1,166
 Midway Island, 3,184
 Misumi, Japan, 490
 Mokpo, Korea, 369
 Nagasaki, Japan, 463
 Naha, Ryukyu Islands, 479
 Nakagusuku, Ryukyu Islands, 515
 Nakhodka, U.S.S.R., 991
 Nikolayevsk, U.S.S.R., 1,742
 Noumea, New Caledonia (via Passe de Dunbea), 4,185
 Omura, Bonin Islands, 1,130
 Otaru, Japan, 1,233
 Pago Pago, American Samoa, 4,794
 Palmyra Island, 4,540
 Papeete, Society Islands, 5,907
 Peng-hu Chiang, Taiwan, 605
 Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,200
 Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,224
 Ponape, Caroline Islands, 2,545
 Pusan, Korea (north of Cheju Do and via South Channel), 491
 Rabaul, New Britain, 2,812
 Sai Gon, Vietnam (via Bonham Strait), 1,679
 San Diego, California, U.S.A. (via Tsugaru Kaikyo), 5,396
 San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,396

San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,502
 San-men Wan, China, 270
 Seattle, Washington (via La Perouse Strait and north of Aleutian Islands), 5,067
 Seattle, Washington (via Tsugaru Kaikyo and north of Aleutian Islands), 5,071
 Seattle, Washington (via Tsugaru Kaikyo and south of Aleutian Islands), 5,131
 Seattle, Washington (via Osumi Kaikyo and south of Aleutian Islands), 5,242
 Shan-tou, China, 708
 Shimonoseki, Japan, 548
 Sitka, Alaska, U.S.A., 4,446
 Su-ao Chiang, Taiwan, 498
 Surabaya, Indonesia, 2,626
 Suva, Fiji Islands, 4,467
 Sydney, Australia (via Vitiaz Strait), 4,636
 Sydney, Australia (via west of New Ireland), 4,642
 Tai-tung Chiang, Taiwan, 612
 Ta-ku, China (via outside islands), 720
 Ta-lien, China, 560
 Tan-shui, China, 446
 Tasa Do, Korea, 597
 Teluk Kau, Halmahera, 1,914
 Tien-ching, China (via Chang-shan Shui-tao), 740
 Truk, Caroline Islands, 2,261
 Tsuruga, Japan, 823
 Valparaiso, Chile (via Tokara Kaikyo), 10,148
 Vinh Cam Ranh, Vietnam, 1,520
 Vladivostok, U.S.S.R. (via south of Cheju Do), 997
 Vladivostok, U.S.S.R. (via north of Cheju Do), 998
 Wakamatsu, Japan, 541
 Wake Island, 2,550
 Wei-hai-wei, China (via South Channel), 483
 Wonsan, Korea (via north of Cheju Do and South Channel), 797
 Yen-tai, China (via outside islands), 523
 Ying-kou, China, 713
 Yokohama, Japan (via Naikai), 1,117
 Yung-chia, China, 365

SHAN-TOU, CHINA

(23°21'00" N., 116°41'00" E.) to:

Junction Points*

Singapore, 1,560

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Aleksandrovsk, U.S.S.R., 2,100
 Apra, Guam (via Bashee Channel), 1,702
 Cebu, Philippines (via Verde Island Passage and Jintotolo Channel), 952
 Cebu, Philippines (via San Bernardino Strait), 969
 Chinnampo, Korea, 1,113
 Djakarta, Indonesia, 1,880
 Hakodate, Japan, 1,660
 Honolulu, Hawaii, U.S.A., 4,688
 Hsia-men, China, 146
 Iloilo, Philippines (via Verde Island Passage), 921
 Iloilo, Philippines (via San Bernardino Strait), 991
 Inchon, Korea, 1,052
 Kobe, Japan (via Osumi Kaikyo), 1,222
 Kuang-chou, China, 266
 Lo-hsing-ta Mao-ti, China, 309
 Lu-shun, China, 1,115
 Manila, Philippines, 623
 Mokpo, Korea, 899
 Nagasaki, Japan, 919
 Petropavlovsk, U.S.S.R., 2,713
 Pusan, Korea, 994
 San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,900
 Shang-hai, China, 708
 Shimonoseki, Japan, 1,029
 Ta-ku, China, 1,274
 Ta-lien, China, 1,113
 Tan-shui, China, 295
 Vladivostok, U.S.S.R., 1,496
 Wei-hai-wei, China, 1,040
 Wonsan, Korea, 1,300
 Yen-tai, China, 1,074
 Yokohama, Japan, 1,435

SHARPNESS, ENGLAND

(51°43'00" N., 2°29'00" W.)

Add 17 miles to Avonmouth distances.

SHEERNESS, ENGLAND

(51°26'30" N., 0°44'00" E.)

Subtract 31 miles from London distances.

SHELBURNE, CANADA

(43°45'00" N., 65°19'00" W.) to:

Junction Points

Montreal, Canada, 1,050

Ports

Churchill, Canada, 2,467
 Reykjavik, Iceland, 2,047
 St. John's, Canada, 621

SHELEKHOVO, KURIL ISLANDS

(50°23'00" N., 155°37'00" E.) to:

Ports

Aleksandrovsk, U.S.S.R., 934
 Aomori, Honshu, Japan, 899
 Attu Island, Alaska, U.S.A., 675
 Dutch Harbor, Alaska, U.S.A. 1,411
 Hakodate, Japan, 865
 Kholmsk, U.S.S.R., 709
 Kiska, Alaska, U.S.A., 867
 Korsakov, U.S.S.R., 616
 Muroran, Japan, 858
 Nemuro, Japan, 597
 Nikolayevsk, U.S.S.R. (north of Sakhalin), 676
 Otaru, Japan, 788
 Petropavlovsk, U.S.S.R., 224
 Vladivostok, U.S.S.R., 1,122
 Wakkanai, Japan, 643
 Zaliv Chikhacheva, U.S.S.R., 971

SHENGJIN, ALBANIA

(41°47'30" N., 19°35'00" E.) to:

Junction Points*

Port Said, U.A.R., 988
 Strait of Gibraltar, 1,382

Ports

Ancona, Italy, 297
 Brindisi, Italy, 103
 Split, Yugoslavia, 207

SHIBETORO, KURIL ISLANDS.

See Slavnoye.

SHIKUKA, SAKHALIN. See Poronaysk.

SHIMIZU, HONSHU, JAPAN

(35°01'00" N., 138°31'00" E.) to:

Ports

Apra, Guam, 1,351
 Kobe, Japan, 279
 Nagoya, Japan, 143
 Shimonoseki, Japan, 469
 Yokohama, Japan, 116

SHIMIZU, SHIKOKU, JAPAN

(32°45'00" N., 132°57'00" E.) to:

Ports

Kagoshima, Japan, 208
 Kure, Japan, 141
 Shimonoseki, Japan, 123
 Yokkaichi, Japan, 286
 Yokohama, Japan, 411

SHIMONOSEKI, JAPAN

(33°57'00" N., 130°56'35" E.) to:

Junction Points*

Panama, Panama (east of Honshu), 8,153
 Panama, Panama (west of Honshu), 8,081
 Punta Arenas, Chile, 9,545
 Singapore (via Formosa Strait), 2,527

Ports

Akita, Japan, 586
 Apra, Guam, 1,451
 Auckland, New Zealand, 4,944
 Cebu, Philippines, 1,547
 Changjon, Korea, 337
 Chongjin, Korea, 480
 Darwin, Australia (via Selat Sele), 2,883
 Djakarta, Indonesia, 2,838
 Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 2,892
 Hakodate, Japan, 683
 Higashi-Iwase, Japan, 466
 Hong Kong, B.C.C., 1,179
 Honolulu, Hawaii, U.S.A., 3,854
 Hsia-men, China, 920
 Hu-lu Tao, China, 781
 Hungnam, Korea, 397
 Iloilo, Philippines, 1,569
 Imabari, Japan, 123
 Inchon, Korea, 489
 Itozaki, Japan, 133
 Iwakuni, Japan, 93
 Kagoshima, Japan (via Bungo Suido), 295
 Kagoshima, Japan (west of Kyushu), 306
 Kimchaek, Korea, 421
 Kobe, Japan, 241
 Kuang-chou, China, 1,262
 Kure, Japan, 116
 Lo-hsing-ta Mao-ti, China, 799
 Lu-shun, China, 637
 Maizuru, Japan, 302
 Manila, Philippines, 1,424
 Masan, Korea, 146
 Miike, Japan, 222

*JUNCTION POINT.—See Preface for use of junction points.

Nagasaki, Japan, 159
 Nagoya, Japan, 434
 Naha, Ryukyu Islands, 530
 Nakhodka, U.S.S.R., 552
 Nanao, Japan, 453
 Niigata, Japan, 492
 Niihama, Japan, 136
 Pago Pago, American Samoa, 4,440
 Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 1,739
 Petropavlovsk, U.S.S.R. (via La Perouse Strait), 1,732
 Pohang, Korea, 164
 Rumoi, Japan, 812
 Sakaidecho, Japan, 169
 Sakata, Japan, 554
 San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 4,912
 San Francisco, California, U.S.A. (south of Honshu), 5,007
 Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 4,586
 Seattle, Washington, U.S.A. (via Tsugaru Kaikyo, and south of Aleutian Islands), 4,646
 Shang-hai, China, 548
 Shan-tou, China, 1,029
 Shimizu, Honshu, Japan, 469
 Shimizu, Shikoku, Japan, 123
 Shimotsui, Japan, 152
 Shiogama, Japan, 756
 Sosura, Korea, 507
 Sydney, Australia, 4, 453
 Ta-ku, China, 790
 Tan-shui, Taiwan, 753
 Tasa Do, Korea, 639
 Tokuyama, Japan, 50
 Tsuruga, Japan, 325
 Unggi, Korea, 511
 Uno, Japan, 177
 Valparaiso, Chile, 9,709
 Vladivostok, U.S.S.R., 565
 Wei-hai-wei, China, 562
 Yen-tai, China, 596
 Yokohama, Japan (via Bungo Suido), 545
 Yosu, Korea, 182

SHIMOTSUI, JAPAN

(34°26'00" N., 133°49'00" E.) to:

Ports

Hirohata, Japan, 88
 Osaka, Japan, 116
 Shimonoseki, Japan, 152
 Yokohama, Japan, 449

SHIOGAMA, JAPAN

(38°19'00" N., 141°03'00" E.) to:

Ports

Aomori, Japan, 311
 Hakodate, Japan, 281
 Itozaki, Japan, 662
 Shimonoseki, Japan, 756
 Yokohama, Japan, 284

SHOREHAM BY SEA, ENGLAND

(50°49'48" N., 0°16'00" W.) to:

Junction Points*

Bishop Rock, England, 249
 Pentland Firth, Scotland, 633
 Ushant, France, 245

Ports

Le Havre, France, 90
 London, England, 161
 Plymouth, England, 162

SIBENIK, YUGOSLAVIA

(43°44'03" N., 15°53'17" E.) to:

Junction Points*

Port Said, U.A.R. (via Corinth Canal), 1,136
 Port Said, U.A.R. (south of Greece), 1,148
 Strait of Gibraltar, 1,522

Ports

Alexandria, U.A.R., 1,039
 Alger, Algeria, 1,094
 Alicante, Spain, 1,249
 Ancona, Italy, 115
 Annaba, Algeria, 874
 Banghazi, Libya, 741
 Barcelona, Spain, 1,153
 Bari, Italy, 167
 Bayrut, Lebanon (via Corinth Canal), 1,184
 Bayrut, Lebanon (south of Greece), 1,218
 Bizerte, Tunisia, 783
 Brindisi, Italy, 217
 Cartagena, Spain, 1,279
 Ceuta, Morocco, 1,502
 Dubrovnik, Yugoslavia, 144
 Genova, Italy, 958
 Gibraltar, 1,504
 Haifa, Israel (via Corinth Canal), 1,187
 Haifa, Israel (south of Greece), 1,214
 Iraklion, Crete, 704
 Istanbul, Turkey (via Corinth Canal), 902

Istanbul, Turkey (south of Greece), 1,001

Izmir, Turkey (via Corinth Canal), 747

Izmir, Turkey (south of Greece), 846

La Spezia, Italy, 923

Livorno, Italy, 887

Malaga, Spain, 1,452

Marseille, France, 1,050

Messina, Sicily, 477

Napoli, Italy, 648

Odessa, U.S.S.R. (via Corinth Canal), 1,250

Odessa, U.S.S.R. (south of Greece), 1,349

Oran, Algeria, 1,290

Palermo, Sicily, 593

Palma, Balearic Islands, 1,112

Piraeus, Greece (via Corinth Canal), 548

Piraeus, Greece (south of Greece), 687

Rijeka, Yugoslavia, 158

Savona, Italy, 969

Siracusa, Sicily, 498

Tarabulus, Libya, 761

Taranto, Italy, 356

Thessaloniki, Greece (via Corinth Canal), 796

Thessaloniki, Greece (south of Greece), 895

Toulon, France, 1,018

Trieste, Free Territory, 192

Tunis, Tunisia, 771

Valencia, Spain, 1,237

Valletta, Malta, 575

Venezia, Italy, 204

Volos, Greece (via Corinth Canal), 737

Volos, Greece (south of Greece), 836

SIBONEY, CUBA. See Puerto Siboney.

SIDI IFNI, IFNI

(29°25'00" N., 10°09'00" W.) to:

Junction Points*

Strait of Gibraltar, 472
 Ushant, France, 1,197

Ports

Porto Grande, Cape Verde Islands, 1,117
 Rabat, Morocco, 357

SIDON, LEBANON. See Sayda.

*JUNCTION POINT.—See Preface for use of junction points.

SIHANOUKVILLE, CAMBODIA

(10°39'00" N., 103°30'00" E.) to:

Junction Points*

Singapore, 638

Sunda Strait, Indonesia, 1,096

Ports

Krung Thep, Thailand, 300

Makasar, Celebes, 1,584

Sai Gon, Vietnam, 419

SIMONS BAY, REPUBLIC OF SOUTH AFRICA

(34°11'22" S., 18°26'29" E.) to:

Junction Points*

Cape Leeuwin, Australia, 4,572

Cape of Good Hope, Republic of South Africa, 23

Port Said, U.A.R., 5,315

Sunda Strait, Indonesia, 5,085

Ports

Port Elizabeth, Republic of South Africa, 391

SINGAPORE*

(1°16'00" N., 103°50'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,579

Lombok Strait, 963

Panama, Panama (via San Bernardino Strait), 10,505

Port Said, U.A.R. (October–April), 5,018

Port Said, U.A.R. (May–September), 5,139

Sunda Strait, Indonesia (via Selat Bangka and Selat Berhala), 532

Wetar Passage, Indonesia (via Selat Riouw and Selat Karimata), 1,587

Ports

Ad Dammam, Saudi Arabia, 3,681

Aden, Aden Protectorate, 3,631

Aden, Aden Protectorate (May–September), 3,752

Akyab, Burma, 1,365

Al Bahrayn, Bahrain, 3,652

Albany, Australia, 2,525

Al Basrah, Iraq, 3,916

Al Gurdagah, U.A.R., 4,754

Al Hudaydah, Yemen, 3,864

Al Kuwayt, Kuwait, 3,833

Al Mukha, Yemen, 3,756

Aleksandrovsk, U.S.S.R., 3,608

Antsirana, Malagasy Republic, 3,554

Ao Phuket, Thailand, 538

Apra, Guam (via Sulu Sea), 2,585

Assab, Ethiopia, 3,769

Balikpapan, Borneo (via Selat Riouw), 1,053

Bandar Abbas, Iran, 3,381

Bandar-e Shahpur, Iran, 3,872

Ban Sattahip, Thailand, 414

Bandjermasin, Borneo, 830

Barbers Point, Hawaii, U.S.A. (via Sulu Sea), 5866

Bassein, Burma, 1,137

Beira, Mozambique, 4,520

Belawan, Indonesia, 368

Berbera, Somali Republic, 3,646

Bikini, Marshall Islands, 3,591

Bombay, India, 2,441

Bur Safajah, U.A.R., 4,729

Bushehr, Iran, 3,737

Calcutta, India, 1,649

Calicut, India, 1,942

Cebu, Philippines, 1,355

Chalna, Pakistan, 1,578

Chan Chiang, China, 1,333

Ching-tao, China, 2,466

Chimu Wan, Ryukyu Islands, 2,046

Chinnampo, Korea, 2,621

Chittagong, Pakistan, 1,517

Cocanada, India, 1,593

Cochin, India, 1,853

Colombo, Ceylon, 1,581

Dar es Salaam, Tanganyika, 4,042

Davao, Philippines, 1,532

Diego Garcia, Chagos Archipelago (via Strait of Malacca), 2,227

Djakarta, Indonesia (via Selat Durian and Selat Bangka), 525

Djakarta, Indonesia (via Selat Riouw and Selat Bangka), 526

Djibouti, French Somaliland, 3,769

Dumai, Indonesia, 200

Durban, Republic of South Africa, 4,872

Dutch Harbor, Alaska, U.S.A., 5,364

East London, Republic of South Africa, 5,082

Eilat, Israel, 4,868

Fort Dauphin, Malagasy Republic, 3,975

Galle, Ceylon, 1,502

Guayaquil, Ecuador (via Surigao Strait), 10,726

Hai-kou, Hai-nan Tao, 1,338

Hakodate, Japan (via Sea of Japan), 3,160

Hong Kong, B.C.C., 1,454

Honolulu, Hawaii, U.S.A. (via Sulu Sea), 5,881

Hsia-men, China, 1,649

Iloilo, Philippines (via Lumbukan Channel), 1,268

Inchon, Korea, 2,560

Jazireh-ye Khark, Iran, 3,739

Jesselton, North Borneo, 832

Jahore Bahru, Malaya, 31

Karachi, Pakistan, 2,882

Khawr al Ama, Neutral Zone, Persian Gulf, 3,801

Kobe, Japan, 2,689

Kodiak, Alaska, U.S.A., 6,020

Krung Thep, Thailand, 842

Kuang-chou, China, 1,518

Kuching, Sarawak, 443

Lo-hsing-ta Mao-ti, China, 1,817

Los Angeles, California, U.S.A. (via San Bernardino Strait), 7,867

Lourenco Marques, Mozambique, 4,769

Lu-shun, China, 2,623

Madras, India, 1,583

Majunga, Malagasy Republic, 3,845

Makasar, Celebes, 1,070

Malacca, Malaysia, 117

Malakal, Palau Islands (via Basilan Strait), 2,006

Manila, Philippines (north of North Danger Reef), 1,330

Masqat, Mascot and Oman, 3,153

Massaua, Ethiopia, 4,018

Massaua, Ethiopia (May–September), 4,139

Midway Island, 4,828

Mina Abd Allah, Kuwait, 3,822

Mina al Ahmadi, Kuwait, 3,825

Mina Su'ud, Neutral Zone, Persian Gulf, 3,803

Mocambique, Mozambique, 4,080

Mogadiscio, Somali Republic, 3,611

Mombasa, Kenya, 3,987

Mormugao, India, 2,217

Mosselbaai, Republic of South Africa, 5,384

Moulmein, Burma, 1,094

Mtwara, Tanganyika, 4,042

Nagasaki, Japan (via Formosa Strait), 2,427

Nagasaki, Japan (east of Taiwan), 2,413

Negapatam, India, 1,568

Nha Trang Bay, Vietnam, 769

Olongapo, Philippines, 1,335

Padang, Indonesia, 1,011

Palembang, Indonesia, 304

Palmyra Island, 5,741

Pei-hai, China, 1,332

Penang, Malaysia, 367

Peng-hu Chiang, Taiwan, 1,660

Petropavlovsk, U.S.S.R. (via La Perouse Strait and Pervyy Kuril'skiy Proliv), 4,194

Port Augusta, Australia, 3,580

Port Blair, Andaman Islands, 929

*JUNCTION POINT.—See Preface for use of junction points.

Port Elizabeth, Republic of South Africa, 5,209
 Port des Galets, Reunion Island, 3,450
 Port Legaspi, Philippines, 1,611
 Port Louis, Mauritius, 3,333
 Port Pirie, Australia, 3,564
 Port Swettenham, Malaysia, 210
 Portland, Oregon, U.S.A., 7,142
 Prince Rupert, Canada, 5,683
 Pulupandan, Philippines, 1,504
 Pusan, Korea, 2,502
 Qui Nhon, Vietnam, 856
 Rangoon, Burma, 1,109
 Rongelap, Marshall Islands, 3,669
 Ra's al Khafji, Neutral Zone, Persian Gulf, 3,799
 Ra's as Sidr, U.A.R., 4,902
 Ra's at Tannurah, Saudi Arabia, 3,701
 Ra's Gharib, U.A.R., 4,827
 Sabang, Indonesia, 601
 Sai Gon, Vietnam, 649
 St. Denis, Reunion Island, 3,445
 San Diego, California, U.S.A., 7,736
 San Fernando, Philippines, 1,379
 San Francisco, California, U.S.A. (via Balintang Channel), 7,353
 San Francisco, California, U.S.A. (via Tawitawi Island), 7,735
 Sandakan, North Borneo (via Banggi South Channel), 1,071
 Seattle, Washington, U.S.A., 7,062
 Seletar, Malaysia, 32
 Shang-hai, China, 2,207
 Shan-tou, China, 1,560
 Shimonoseki, Japan, 2,527
 Sihanoukville, Cambodia, 638
 Sitka, Alaska, U.S.A., 6,433
 Sorido, Indonesia, 2,202
 Sorong, New Guinea, 1,894
 Suakin, Sudan, 4,251
 Sukarnapura, Indonesia, 2,510
 Surabaya, Indonesia, 763
 Tjirebon, Indonesia, 624
 Ta-ku, China, 2,770
 Ta-lien, China, 2,612
 Tamatave, Malagasy Republic, 3,675
 Tanga, Tanganyika, 4,037
 Tandjung Uban, Indonesia, 27
 Tan-shui, Taiwan, 1,800
 Tarakan, Indonesia, 1,286
 Teluk Kau, Halmahera (south of Celebes and Borneo), 1,997
 Truk, Caroline Islands, 3,052
 Umm Said, Qatar, 3,630
 Vancouver, Canada, 7,078
 Victoria, Seychelles, 3,067
 Victoria, North Borneo, 762
 Vinh Cam Ranh, Vietnam, 786
 Vladivostok, U.S.S.R., 3,004

Wake Island (via Surigao Strait), 3,885
 Wallaroo, Australia, 3,500
 Wai-hai-wei, China, 2,548
 Whyalla, Australia, 3,546
 Wonsan, Korea, 2,808
 Wotho, Marshall Islands, 3,614
 Yen-tai, China, 2,582
 Yin-hsien, China (via Shih-peng Ching, Steep Island Pass, Pai-chieh Hsia), 2,091
 Yokohama, Japan, 2,889
 Zamboanga, Philippines (via Balabac Strait), 1,197
 Zanzibar, Zanzibar, 4,060

SINT NICOLAAS, ARUBA

(12°25'45" N., 69°54'30" W.) to:

Junction Points*

Yucatan Channel, 1,036

Ports

Boston, Massachusetts, U.S.A., 1,853
 Castries, St. Lucia, 532
 Colon, Panama, 633
 Georgetown, British Guiana, 856
 Guantanamo, Cuba, 544
 Hamilton, Bermuda, 1,263
 Kingston, Jamaica, 528
 La Guaira, Venezuela, 207
 New York, New York, U.S.A. (via Windward Passage), 1,805
 New York, New York, U.S.A. (via Mona Passage), 1,761
 Norfolk, Virginia, U.S.A. (via Mona Passage), 1,600
 Norfolk, Virginia, U.S.A. (via Windward Passage), 1,611
 Philadelphia, Pennsylvania, U.S.A., 1,732
 Pointe a Pitre, Guadeloupe, 550
 Port of Spain, Trinidad, 515
 St. Johns, Antigua, 549

SIRACUSA, SICILY, ITALY

(37°03'29" N., 15°17'21" E.) to:

Junction Points*

Port Said, U.A.R., 924
 Strait of Gibraltar, 1,054

Ports

Alexandria, U.A.R., 809
 Alger, Algeria, 626
 Alicante, Spain, 792
 Ancona, Italy, 557
 Annaba, Algeria, 401

Banghazi, Libya, 381
 Barcelona, Spain, 752
 Bari, Italy, 350
 Bayrut, Lebanon, 1,013
 Bizerte, Tunisia, 296
 Brindisi, Italy, 292
 Cartagena, Spain, 817
 Ceuta, Morocco, 1,035
 Civitavecchia, Italy, 373
 Genova, Italy, 557
 Gibraltar, 1,037
 Haifa, Israel, 1,013
 Iraklion, Crete, 495
 Izmir, Turkey (via corinth Canal), 772
 Istanbul, Turkey (via south of Greece), 798
 Izzmir, Turkey (via Corinth Canal), 618
 Izmir, Turkey (south of Greece), 644
 Kavala, Greece (via Corinth Canal), 656
 Kavala, Greece (south of Greece), 682
 La Spezia, Italy, 521
 Livorno, Italy, 486
 Malaga, Spain, 985
 Marseille, France, 649
 Messina, Sicily, 75
 Napoli, Italy, 247
 Odessa, U.S.S.R. (via Corinth Canal), 1,120
 Odessa, U.S.S.R. (south of Greece), 1,146
 Oran, Algeria, 823
 Palermo, Sicily, 192
 Palma, Balearic Islands, 668
 Piraievs, Greece (via Corinth Canal), 418
 Piraievs, Greece (south of Greece), 484
 Rijeka, Yugoslavia, 624
 Savona, Italy, 567
 Sibenik, Yugoslavia, 498
 Split, Yugoslavia, 483
 Tarabulus, Libya, 276
 Taranto, Italy, 245
 Tarragona, Spain, 746
 Thessaloniki, Greece (via Corinth Canal), 667
 Thessaloniki, Greece (south of Greece), 692
 Toulon, France, 617
 Trieste, Free Territory, 658
 Tunis, Tunisia, 283
 Valencia, Spain, 790
 Valletta, Malta, 88
 Venezia, Italy, 668
 Volos, Greece (via Corinth Canal), 608
 Volos, Greece (south of Greece), 634

*JUNCTION POINT.—See Preface for use of junction points.

SIROS, GREECE. See Ermoupolis.

SITKA, ALASKA, U.S.A.

(57°03'00" N., 135°20'30" W.) to:

Junction Points*

Panama, Panama, 4,524
Punta Arenas, Chile, 7,455
Singapore, 6,433

Ports

Apra, Guam, 4,407
Auckland, New Zealand, 6,176
Callao, Peru, 5,255
Ching-tao, China, 4,454
Darwin, Australia, 6,338
Guayaquil, Ecuador, 4,817
Hai-kou, Hai-nan Tao, 5,345
Hakodate, Japan (south of Aleutian Islands), 3,338
Hong Kong, B.C.C. (south of Aleutian Islands), 5,136
Hong Kong, B.C.C. (alternate route north of Aleutian Islands), 5,095
Honolulu, Hawaii, U.S.A., 2,386
Ketchikan, Alaska, U.S.A., 224
Los Angeles, California, U.S.A., 1,640
Manila, Philippines (south of Aleutian Islands), 5,323
Manila, Philippines (alternate route north of Aleutian Islands), 5,302
Midway Island, 2,473
Noumea, New Caledonia, 5,613
Pago Pago, American Samoa, 4,635
Palmyra Island, 3,323
Papeete, Society Islands, 4,537
Petropavlovsk, U.S.S.R., 2,314
Prince Rupert, Canada, 285
Sai Gon, Vietnam, 5,963
San Diego, California, U.S.A., 1,725
San Francisco, California, U.S.A., 1,302
Seattle, Washington, U.S.A., 806
Shang-hai, China, 4,446
Skagway, Alaska, U.S.A., 181
Surabaya, Indonesia, 6,564
Suva, Fiji Islands, 5,112
Sydney, Australia, 6,595
Truk, Caroline Islands, 4,473
Valdez, Alaska, U.S.A., 478
Valparaiso, Chile, 6,407
Vancouver, Canada, 823
Vladivostok, U.S.S.R., 3,585
Wake Island, 3,405
Wrangell, Alaska, U.S.A., 170
Yakutat, Alaska, U.S.A., 231
Yokohama, Japan (south of Aleutian Islands), 3,640
Yokohama, Japan (alternate route north of Aleutian Islands), 3,620

SITRAH ANCHORAGE, BAHRAIN ISLAND

(26°10'00" N., 50°41'00" E.)

Use Al Bahrayn distances.

SKAGENS ODDE, DENMARK*

(57°48'00" N., 10°44'00" E.) to:

Junction Points*

Bishop Rock, England, 851
Pentland Firth, Scotland, 450
Ushant, France, 833

Ports

Aalborg, Denmark, 87
Aarhus, Denmark, 127
Abenra, Denmark, 229
Aberdeen, Scotland, 416
Alesund, Norway, 450
Amsterdam, Netherlands, 422
Antwerpen, Belgium, 528
Assens, Denmark, 187
Baltiysk, U.S.S.R. (via Store Baelt), 544
Baltiysk, U.S.S.R. (via The Sound), 429
Bergen, Norway, 305
Berlevag, Norway, 1,243
Bremerhaven, Germany, 320
Cherbourg, France, 671
Dover, England, 527
Dundee, Scotland, 455
Dunkerque, France, 511
Egersund, Norway, 165
Emden, Germany, 344
Esbjerg, Denmark, 234
Faborg, Denmark, 234
Farsund, Norway, 132
Flekkefjord, Norway, 155
Flensburg, Germany, 260
Fredericia, Denmark, 169
Frederikshavn, Denmark, 24
Gavle, Sweden, 676
Gdansk, Poland (via Store Baelt), 556
Gdansk, Poland (via The Sound), 418
Gdynia, Poland (via Store Baelt), 552
Goteborg, Sweden, 42
Grena, Denmark, 115
Haderslev, Denmark, 216
Hakonsvern, Norway, 296
Halmstad, Sweden, 101
Halsingborg, Sweden, 128
Hamburg, Germany, 360
Hamina, Finland, 797
Hango, Finland, 625
Harstad, Norway, 911
Hartlepool, England, 438
Harwich, England, 487
Helsingør, Denmark, 127

Helsinki, Finland (via Store Baelt), 841
Helsinki, Finland (via The Sound), 687
Hirtshals, Denmark, 30
Hobro, Denmark, 101
Horsens, Denmark, 170
Hull, England, 462
Inverness, England, 481
Iokanga, U.S.S.R., 1,517
Kalmar, Sweden (via Store Baelt), 496
Kalmar, Sweden (via The Sound), 342
Kalundborg, Denmark, 141
Karlskrona, Sweden, 295
Kobenhavn, Denmark, 150
Koge, Denmark, 161
Kolding, Denmark, 289
Korsør, Denmark, 162
Klaipeda, Lithuania (via Store Baelt), 612
Klaipeda, Lithuania (via The Sound and north of Bornholm), 462
Kotka, Finland, 755
Kristiansand, Norway, 92
Kyndbyvaerkets, Denmark, 136
Landskrona, Sweden, 137
Le Havre, France, 639
Leith, Scotland, 472
Leningrad, U.S.S.R. (via Store Baelt), 992
Leningrad, U.S.S.R. (via The Sound), 841
Liepaja, Latvia (via The Sound), 467
Liepaja, Latvia (via Store Baelt), 619
Lillesand, Norway, 80
Limhamn, Sweden, 159
London, England, 556
Lubeck, Germany, 263
Lulea, Sweden (via Store Baelt), 1,101
Lulea, Sweden (via The Sound), 941
Malmo, Sweden, 155
Mandal, Norway, 110
Masnedsund, Denmark, 122
Middlefart, Denmark, 186
Molde, Norway, 492
Mosjoen, Norway, 732
Musko Island, Sweden, 524
Naestved, Denmark, 212
Nakskov, Denmark, 213
Namsos, Norway, 696
Newcastle, England, 445
Norrköping, Sweden, 520
Odense, Denmark, 126
Oostende, Belgium, 489
Ornskölsvik, Sweden, 798
Oslo, Norway, 131
Oulu, Finland, 979
Oxelösund, Sweden, 481
Pechenga, U.S.S.R., 1,325
Peenemünde, Germany, 272

*JUNCTION POINT.—See Preface for use of junction points.

Pitea, Sweden, 925
 Plymouth, England, 756
 Porkkala, Finland, 697
 Portland, England, 682
 Portsmouth, England, 632
 Randers, Denmark, 96
 Reposaari, Finland, 715
 Riga, Latvia (via Store Baelt), 771
 Riga, Latvia (via The Sound), 617
 Risør, Norway, 73
 Ronne, Denmark (via The Sound), 244
 Ronne, Denmark (via Store Baelt), 389
 Rostock, Germany, 254
 Rosyth, Scotland, 478
 Rotterdam, Netherlands, 448
 Ruch'i, U.S.S.R., 816
 Sassnitz, Germany, 239
 Sogndal, Norway, 154
 Sonderborg, Denmark, 251
 Sondre Honningsvåg, Norway, 1,192
 Southampton, England, 650
 Stavanger, Norway, 221
 Stockholm, Sweden (via The Sound), 567
 Stockholm, Sweden (via Sandhamn-sleden and Store Baelt), 719
 Stralsund, Germany, 226
 Sundsvall, Sweden, 745
 Swinoujscie, Poland (via Store Baelt), 402
 Swinoujscie, Poland (via The Sound), 275
 Szczecin, Poland, 410
 Tallinn, Estonia, 661
 Tornio, Finland (via The Sound), 973
 Tornio, Finland (via Store Baelt), 1,137
 Torshavn, Faeroe Islands, 624
 Travemünde, Germany (via Store Baelt), 304
 Trelleborg, Sweden (via Store Baelt), 357
 Trelleborg, Sweden (via The Sound), 192
 Turku, Finland (via Store Baelt), 795
 Turku, Finland (via The Sound), 642
 Tvedestrand, Norway, 76
 Umea, Sweden, 812
 Uusikaupunki, Finland (via Store Baelt), 847
 Vaasa, Finland, 805
 Vardo, Norway, 1,287
 Vejle, Denmark, 189
 Ventspils, Latvia, 502
 Vysotsk, U.S.S.R. (via Store Baelt), 923
 Vysotsk, U.S.S.R. (via The Sound), 803

Wilhelmshaven, Germany, 314
 Wismar, Germany, 281
 Zeebrugge, Belgium, 479

SKAGWAY, ALASKA, U.S.A.
 (59°27'00" N., 135°20'00" W.) to:

Junction Points*
 Panama, Panama, 4,739

Ports
 Seattle, Washington, U.S.A., 934
 Sitka, Alaska, U.S.A., 187
 Vancouver, Canada, 1,021
 Wrangell, Alaska, U.S.A., 231

SKARAMANGAS, GREECE
 (37°59'25" N., 23°34'00" E.)

Add 4 miles to Piraeus distances.

SKIEN, NORWAY
 (59°12'15" N., 9°36'50" E.) to:

Junction Points*
 Pentland Firth, Scotland, 466

Ports
 Bergen, Norway, 317
 Bremerhaven, Germany, 372
 London, England, 609

SKIKDA, ALGERIA
 (36°53'24" N., 6°54'25" E.) to:

Junction Points*
 Port Said, U.A.R., 1,337
 Strait of Gibraltar, 629

Ports
 Alger, Algeria, 200
 Barcelona, Spain, 354
 Cartagena, Spain, 395
 Marseille, France, 398
 Oran, Algeria, 398
 Sete, France, 422
 Toulon, France, 381

SLAVNOYE, KURIL ISLANDS
 (45°30'30" N., 148°36'30" E.) to:

Ports
 Aleksandrovsk, U.S.S.R., 592
 Aomori, Japan, 501
 Attu Island, Alaska, U.S.A., 1,053
 Dutch Harbor, Alaska, U.S.A., 1,792

Hakodate, Japan, 467
 Kholmsk, U.S.S.R., 364
 Kiska, Alaska, U.S.A., 1,227
 Korsakov, U.S.S.R., 276
 Muroran, Japan, 462
 Nemuro, Japan, 199
 Nikolayevsk, U.S.S.R. (south of Sakhalin), 743
 Otaru, Japan, 442
 Petropavlovsk, U.S.S.R., 629
 Sovetskaya Gaven, U.S.S.R., 484
 Vladivostok, U.S.S.R., 780
 Wakkanai, Japan, 301
 Zaliv Chikhacheva, U.S.S.R., 628

SMALKALDEN, SURINAM
 (5°37'10" N., 55°05'27" W.)

Add 20 miles to Paramaribo distances.

SMYRNA, TURKEY. See Izmir.

SOERABAJA, INDONESIA. See Surabaya.

SOGNDAL, NORWAY
 (58°19'17" N., 6°17'12" E.) to:

Junction Points*
 Pentland Firth, Scotland, 123
 Skagens Odde, Denmark, 154

Ports
 Bergen, Norway, 152
 London, England, 641
 Oslo, Norway, 228

SONDERBORG, DENMARK
 (54°54'36" N., 9°47'15" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 46
 Skagens Odde, Denmark, 251

Ports
 Gdynia, Poland, 360
 Goteborg, Sweden, 239
 Swinoujscie, Poland, 215

SONDRE HONNINGSVAG, NORWAY
 (70°59'00" N., 25°58'00" E.) to:

Junction Points*
 Pentland Firth, Scotland, 1,099
 Skagens Odde, Denmark, 1,192

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Arkhangelsk, U.S.S.R., 612
Dikson Harbor, U.S.S.R., 1,133
Reykjavik, Iceland, 1,321

SONGJIN, KOREA. See Kimchaek.

SORIDO, INDONESIA
(1°10'00" S., 136°02'00" E.) to:

Junction Points*
Singapore, 2,202
Torres Strait, Australia, 1,329

Ports
Djakarta, Indonesia, 1,879
Makasar, Celebes, 1,180
Sukarnapura, Indonesia, 311

SORONG, INDONESIA
(0°53'00" S., 131°14'00" E.) to:

Junction Points*
Singapore, 1,894
Torres Strait, Australia, 1,021

Ports
Apra, Guam, 1,171
Davao, Philippines, 601
Makasar, Celebes, 872
Rabaul, New Britain, 1,304
Sukarnapura, Indonesia, 637

SOSURA, KOREA
(42°15'20" N., 130°36'00" E.) to:

Ports
Hakodate, Japan, 482
Maizuru, Japan, 469
Pusan, Korea, 448
Shimonoseki, Japan, 507

SOSURA-RI, KOREA. See Sosura.

SOUDA, CRETE. See Soudha.

SOUDHA, CRETE
(35°29'30" N., 24°04'45" E.) to:

Junction Points*
Port Said, U.A.R., 507
Strait of Gibraltar, 1,479

Ports
Alexandria, U.A.R., 425
Izmir, Turkey, 281

Messina, Sicily, 473
Piraeus, Greece, 159

SOUR, LEBANON. See Sur.

SOUSSE, TUNISIA
(35°49'30" N., 10°39'30" E.) to:

Junction Points*
Port Said, U.A.R., 1,133
Strait of Gibraltar, 909

Ports
Annaba, Algeria, 255
Tarabulus, Libya, 231
Valletta, Malta, 197

SOUTHAMPTON, ENGLAND
(50°53'00" N., 1°23'30" W.) to:

Junction Points*
Bishop Rock, England (via Needles Channel), 232
Kiel Canal (east end), Germany, 533
Skagens Odde, Denmark, 650
Ushant, France, 223

Ports
Aberdeen, Scotland, 532
Amsterdam, Netherlands, 284
Antwerpen, Belgium, 260
Barrow in Furness, England, 485
Bergen, Norway, 713
Boulogne, France, 120
Caen, France, 119
Cardiff, Wales, 346
Dartmouth, England, 100
Dover, England, 123
Dundee, Scotland, 515
Dunkerque, France, 168
Egersund, Norway, 407
Emden, Germany, 600
Esbjerg, Denmark, 493
Fishguard, Wales, 343
Fleetwood, England, 485
Hamburg, Germany, 522
Hartlepool, England, 396
Holyhead, Wales, 414
Hull, England, 336
Kristiansand, Norway, 611
Leith, Scotland, 513
Liverpool, England, 479
London, England, 215
Newcastle, England, 421
Nieuwpoort, Belgium, 176
Oostende, Belgium, 192
Oslo, Norway, 763
Plymouth, England, 134

Portland, England, 57
Rotterdam, Netherlands, 261
Stavanger, Norway, 640
Sunderland, England, 400
Wilhelmshaven, Germany, 451
Zeebrugge, Belgium, 197

SOVETSKAYA GAVEN, U.S.S.R.
(48°59'00" N., 140°16'00" E.) to:

Ports
Korsakov, U.S.S.R., 264
Nikolayevsk, U.S.S.R. (via south channel), 276
Slavnoye, Kuril Islands, 484
Vladivostok, U.S.S.R., 593

SPEZIA, ITALY. See La Spezia.

SPLIT, YUGOSLAVIA
(43°30'16" N., 16°26'10" E.) to:

Junction Points*
Port Said, U.A.R. (via Corinth Canal), 1,121
Port Said, U.A.R. (south of Greece), 1,133
Strait of Gibraltar, 1,507

Ports
Alexandria, U.A.R., 1,024
Alger, Algeria, 1,079
Alicante, Spain, 1,234
Ancona, Italy, 132
Annaba, Algeria, 859
Banghazi, Libya, 726
Barcelona, Spain, 1,138
Bari, Italy, 155
Bayrut, Lebanon (via Corinth Canal), 1,169
Bayrut, Lebanon (south of Greece), 1,203
Bizerte, Tunisia, 768
Brindisi, Italy, 202
Cartagena, Spain, 1,264
Ceuta, Morocco, 1,487
Durrës, Albania, 216
Genova, Italy, 943
Gibraltar, 1,489
Haifa, Israel (via Corinth Canal), 1,172
Haifa, Israel (south of Greece), 1,199
Iraklion, Crete, 689
Istanbul, Turkey (via Corinth Canal), 887
Istanbul, Turkey (south of Greece), 986
Izmir, Turkey (via Corinth Canal), 732

*JUNCTION POINT.—See Preface for use of junction points.

Izmir, Turkey (south of Greece), 831
 La Spezia, Italy, 908
 Livorno, Italy, 872
 Malaga, Spain, 1,436
 Marseille, France, 1,035
 Messina, Sicily, 462
 Monopoli, Italy, 173
 Napoli, Italy, 633
 Odessa, U.S.S.R. (via Corinth Canal), 1,235
 Odessa, U.S.S.R. (south of Greece), 1,334
 Oran, Algeria, 1,275
 Palermo, Sicily, 578
 Palma, Balearic Islands, 1,096
 Pescara, Italy, 123
 Piraeus, Greece (via Corinth Canal), 533
 Piraeus, Greece (south of Greece), 672
 Rijeka, Yugoslavia, 176
 Sarande, Albania, 293
 Savona, Italy, 954
 Sevastopol, U.S.S.R. (via Corinth Canal), 1,188
 Sevastopol, U.S.S.R. (south of Greece), 1,287
 Shengjin, Albania, 207
 Siracusa, Sicily, 483
 Tarabulus, Libya, 746
 Taranto, Italy, 341
 Thessaloniki, Greece (via Corinth Canal), 781
 Thessaloniki, Greece (south of Greece), 880
 Toulon, France, 1,003
 Trieste, Free Territory, 210
 Tunis, Tunisia, 756
 Valencia, Spain, 1,222
 Valletta, Malta, 560
 Venezia, Italy, 221
 Vlores, Albania, 252
 Volos, Greece (via Corinth Canal), 722
 Volos, Greece (south of Greece), 821

STANLEY, FALKLAND ISLANDS
 (51°41'30" S., 57°51'00" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 4,141
 Punta Arenas, Chile, 558

Ports

Caleta Olivia, Argentina, 516
 Comodoro Rivadavia, Argentina, 531
 Maldonado, Uruguay, 1,023
 Montevideo, Uruguay, 1,013
 New York, New York, U.S.A., 6,547
 Port Gallegos, Argentina, 460

Puerto Concepcion, Argentina, 538
 Puerto Cortes, Honduras, 6,585
 Puerto Descado, Argentina, 409
 Puerto Madryn, Argentina, 633
 Rio Gande, Argentina, 398
 Ushuaia, Argentina, 468

STAPLETON, NEW YORK, U.S.A.
 (40°38'00" N., 74°04'00" W.)

For ocean distances, subtract 4½ miles from New York distances.

STAVANGER, NORWAY
 (58°58'30" N., 5°44'00" E.) to:

Junction Points*

Bishop Rock, England (via English Channel), 836
 Pentland Firth, Scotland, 290
 Skagens Odde, Denmark, 221
 Ushant, France, 823

Ports

Aberdeen, Scotland, 278
 Amsterdam, Netherlands, 424
 Antwerpen, Belgium, 525
 Bergen, Norway (outer lead), 115
 Bergen, Norway (inner lead), 111
 Bremerhaven, Germany, 366
 Calais, France, 515
 Cherbourg, France, 661
 Dover, England, 517
 Dunkerque, France, 510
 Emden, Germany, 376
 Esbjerg, Denmark, 278
 Hamburg, Germany, 403
 Hull, England, 408
 Kristiansand, Norway, 142
 Kristiansund, Norway, 332
 Le Havre, France, 629
 Leith, Scotland, 346
 London, England, 539
 Newcastle, England, 349
 Oostende, Belgium, 488
 Oslo, Norway, 294
 Plymouth, England, 746
 Portland, England, 672
 Portsmouth, England, 622
 Rotterdam, England, 455
 Southampton, England, 640
 Tromsø, Norway, 810
 Wilhelmshaven, Germany, 360
 Zeebrugge, Belgium, 481

STENHOUSE BAY, AUSTRALIA
 (35°17'00" S., 136°57'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,077
 Sunda Strait, Indonesia, 2,892

Ports

Albany, Australia, 936
 Hobart, Tasmania, 766
 Melbourne, Australia, 505

STETTIN, POLAND. See Szczecin.

STOCKHOLM, SWEDEN

(59°19'30" N., 18°05'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 503
 Skagens Odde, Denmark (via Sandhamnsleden and Store Bael), 695
 Skagens Odde, Denmark (via The Sound), 567

Ports

Gavle, Sweden, 153
 Halmstad, Sweden, 481
 Halsingborg, Sweden, 436
 Hamina, Finland, 325
 Hango, Finland, 178
 Helsingor, Denmark (via Store Bael), 629
 Helsingor, Denmark (via The Sound), 445
 Helsinki, Finland, 239
 Hobro, Denmark, 610
 Horsens, Denmark, 567
 Kalundborg, Denmark, 531
 Karlskrona, Sweden, 290
 Kobenhavn, Denmark (via Store Bael and Dalarn Kanal), 603
 Kobenhavn, Denmark (via Store Bael and Sandofjarden), 646
 Korsor, Denmark, 524
 Kotka, Finland, 311
 Kyndbyvaerkets, Denmark, 493
 Landskrona, Sweden, 424
 Leningrad, U.S.S.R., 386
 Limhamn, Sweden, 427
 London, England, 1,251
 Lubeck, Germany, 491
 Malmo, Sweden (via Drogden), 435
 Malmo, Sweden (via Flintrannan), 422
 Masnedsund, Denmark, 531
 Narvik, Norway, 1,612
 Norrkoping, Sweden, 143
 Odense, Denmark, 609
 Ornskoldsvik, Sweden, 274
 Oslo, Norway (via Store Bael), 819
 Oslo, Norway (via The Sound), 683
 Oulu, Finland, 456
 Peenemunde, Germany, 422
 Pitea, Sweden, 402
 Porkkala, Finland, 216
 Randers, Denmark, 604
 Rauma, Finland, 230

*JUNCTION POINT.—See Preface for use of junction points.

Reposaari, Finland, 192
 Rostock, Germany, 456
 Ruch'i, U.S.S.R., 344
 Sassnitz, Germany, 390
 Stralsund, Germany, 423
 Sundsvall, Sweden, 222
 Tallinn, Estonia (via Sandofjarden), 220
 Uusikaupunki, Finland, 164
 Umea, Sweden, 289
 Vaasa, Finland, 282
 Ventspils, Latvia, 174
 Wismar, Germany, 101

STORNOWAY, SCOTLAND

(58°12'00" N., 6°23'00" W.) to:

Junction Points*
 Pentland Firth, Scotland, 54

Ports
 Belfast, Ireland, 234
 Glasgow, Scotland, 283
 Reykjavik, Iceland, 647

STRAHAN, AUSTRALIA

(42°10'00" S., 145°20'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 1,492
 Wilson Promontory, Australia, 254

Ports
 Adelaide, Australia, 595
 Albany, Australia, 1,356
 Melbourne, Australia, 303

STRAIT OF GIBRALTAR*

(35°57'00" N., 5°45'00" W.) to:

Junction Points*
 Bishop Rock, England, 969
 Cape of Good Hope, Republic of South Africa, 5,082
 Inishtrahull, Ireland, 1,350
 Montreal, Canada (tracks C and D), 3,243
 Montreal, Canada (track E), 3,163
 Montreal, Canada (track F), 3,161
 Panama, Panama (via Anegada Passage), 4,351
 Pentland Firth, Scotland, 1,598
 Port Said, U.A.R., 1,943
 Punta Arenas, Chile, 6,352
 Straits of Florida, 4,009
 Straits of Florida (low power, May-September), 4,013
 Straits of Florida (low power, October-April), 4,038

Ushant, France, 918
 Yucatan Channel, 4,185

Ports
 Abidjan, Ivory Coast, 2,656
 Ajaccio, Corsica, 778
 Akureyri, Iceland, 2,102
 Al Hammamat, Tunisia, 888
 Al Khums, Libya, 1,130
 Al Ladhikiyah, Syria, 2,029
 Alcudia, Balearic Islands, 526
 Alexandria, U.A.R., 1,822
 Alexandroupolis, Greece, 1,716
 Algeciras, Spain, 25
 Alger, Algeria, 437
 Alicante, Spain, 317
 Almeria, Spain, 171
 Almina, Al Bayda, Syria, 2,028
 Amboin, Angola, 4,099
 Ancona, Italy, 1,580
 Angmagssalik, Greenland, 2,162
 Annaba, Algeria, 675
 Antalya, Turkey, 1,822
 Argentina, Canada (track F), 2,302
 Arkhangelsk, U.S.S.R., 3,225
 Arzew, Algeria, 275
 As Sukhayrah, Tunisia, 1,072
 Ashdod Yam, Israel, 2,031
 Augusta, Sicily, 1,065
 Aviles, Spain, 722
 Baltimore, Maryland, U.S.A. (track A), 3,461
 Baltimore, Maryland, U.S.A. (track B), 3,458
 Banghazi, Libya, 1,356
 Baniyas, Syria, 2,045
 Barcelona, Spain, 534
 Bari, Italy, 1,374
 Barletta, Italy, 1,398
 Bastia, Corsica, 868
 Bathurst, Gambia, 1,575
 Batumi, U.S.S.R. (via Corinth Canal), 2,392
 Batumi, U.S.S.R. (south of Greece), 2,408
 Bayonne, France, 912
 Bayrut, Lebanon, 2,034
 Beaulieu, France, 792
 Bejaia, Algeria, 545
 Belem, Brazil, 3,285
 Bilbao, Spain, 854
 Bizerte, Tunisia, 769
 Bonifacio, Corsica, 779
 Bordeaux, France, 1,010
 Boston, Massachusetts, U.S.A. (track A), 3,031
 Boston, Massachusetts, U.S.A. (track B), 3,014
 Boston, Massachusetts, U.S.A. (track C), 2,998
 Brindisi, Italy, 1,315
 Buenos Aires, Argentina, 5,280

Cadiz, Spain, 50
 Cagliari, Sardinia, 750
 Calabar, Nigeria, 3,420
 Camp Lloyd, Greenland, 2,676
 Cannes, France, 773
 Cape Town, Republic of South Africa, 5,064
 Cartegna, Colombia, 4,087
 Cartagena, Spain, 259
 Casablanca, Morocco, 166
 Castellamare di Stabia, Italy, 1,006
 Castries, St. Lucia, 3,236
 Catania, Sicily, 1,081
 Ceuta, Morocco, 23
 Charleston, South Carolina, U.S.A. (track A), 3,593
 Charlotte Amalie, Virgin Islands, 3,323
 Chioggia, Italy, 1,682
 Christianshaab, Greenland, 2,679
 Cienfuegos, Cuba, 4,102
 Civitavecchia, Italy, 907
 Colon, Panama (via Mona Passage), 4,308
 Constanta, Rumania (via Corinth Canal), 2,001
 Constanta, Rumania (south of Greece), 2,018
 Crotone, Italy, 1,412
 Dakar, Senegal, 1,487
 Darnah, Libya, 1,450
 Derince, Turkey (via Corinth Canal), 1,838
 Derince, Turkey (south of Greece), 1,855
 Dikili, Turkey, 1,532
 Dubrovnik, Yugoslavia, 1,420
 Durres, Albania, 1,349
 Egedesminde, Greenland, 2,772
 Elizabeth Harbor, Bahamas, 3,651
 Ermoupolis, Greece, 1,524
 Faeringehavn, Greenland, 2,444
 Famagusta, Cyprus, 1,991
 Fethiye, Turkey, 1,712
 Frederiksdal, Greenland, 2,115
 Freetown, Sierra Leone, 1,966
 Funchal, Madeira Island, 589
 Gaeta, Italy, 986
 Gallipoli, Italy, 1,246
 Galway, Ireland, 1,184
 Genova, Italy, 868
 Georgetown, British Guiana, 3,358
 Ghazaouet, Algeria, 199
 Gibraltar, 24
 Godthaab, Greenland, 2,477
 Golfe-Juan, France, 780
 Golfo di Oristano, Spain, 716
 Goose Bay, Canada, 2,538
 Gronne Dal, Greenland, 2,309
 Guantanamo, Cuba, 3,737
 Guiria, Venezuela, 3,430
 Habana, Cuba, 4,013

*JUNCTION POINT.—See Preface for use of junction points.

Hafnarfjörður, Iceland, 1,956
 Haifa, Israel, 2,031
 Halifax, Canada (track A), 2,728
 Halifax, Canada (track B), 2,705
 Halifax, Canada (tracks C and D), 2,686
 Halifax, Canada (track E), 2,653
 Halifax, Canada (track F), 2,658
 Halifax, Canada (direct), 2,650
 Hamilton, Bermuda, 2,903
 Holsteinsborg, Greenland, 2,649
 Horta, Azores, 1,102
 Hyeres, France, 725
 Huelva, Spain, 102
 Hvalfjörður, Iceland, 1,944
 Iraklion, Crete, 1,516
 Iskenderun, Turkey, 2,054
 Istanbul, Turkey (via Corinth Canal), 1,804
 Istanbul, Turkey (south of Greece), 1,821
 Ivigtut, Greenland (direct), 2,283
 Ivigtut, Greenland (via 75 miles off Kap Farvel), 2,304
 Izmir, Turkey (via Corinth Canal), 1,650
 Izmir, Turkey (south of Greece), 1,667
 Jacksonville, Florida, U.S.A., 3,740
 Jaffa, Israel, 2,030
 Jakobshavn, Greenland, 2,819
 Kalamai, Greece, 1,370
 Kavala, Greece (via Corinth Canal), 1,689
 Kavala, Greece (south of Greece), 1,706
 Keflavik, Iceland, 1,947
 Kerch, U.S.S.R. (via Corinth Canal), 2,239
 Kerch, U.S.S.R. (south of Greece), 2,256
 Kerkira, Greece, 1,324
 Key West, Florida, U.S.A., 3,949
 Khalkis, Greece (via Corinth Canal), 1,545
 Khalkis, Greece (south of Greece), 1,562
 Khania, Crete, 1,459
 Kingston, Jamaica, 3,891
 Kyrenia, Cyprus, 1,910
 La Guaira, Venezuela, 3,634
 La Pallice, France, 950
 La Spezia, Italy, 891
 Lagos, Nigeria, 3,100
 Larnaca, Cyprus, 1,953
 Las Palmas de Gran Canaria, Canary Islands, 681
 Limassol, Cyprus, 1,914
 Limin Khίου, Greece, 1,603
 Lisboa, Portugal, 286
 Livorno, Italy, 887

Mahon, Balearic Islands, 552
 Malaga, Spain, 78
 Marin, Spain, 517
 Marsala, Sicily, 881
 Marsaxlokk, Malta, 1,017
 Marseille, France, 711
 Marshall, Liberia, 2,197
 Matruh, U.A.R., 1,695
 Melilla, Morocco, 154
 Mentone, France, 791
 Mers el Kebir, Algeria, 252
 Mersin, Turkey, 1,996
 Messina, Sicily, 1,049
 Mitilini, Greece (via Corinth Canal), 1,631
 Mitilini, Greece (south of Greece), 1,528
 Monaco, Monaco, 762
 Monopoli, Italy, 1,346
 Montevideo, Uruguay, 5,178
 Mostaganem, Algeria, 283
 Nanortalik, Greenland, 2,138
 Narsarssuak, Greenland, 2,257
 Natal, Brazil, 3,003
 Navplion, Greece, 1,484
 New Haven, Connecticut, U.S.A., 3,161
 New London, Connecticut, U.S.A. (track A), 3,102
 New London, Connecticut, U.S.A. (track B), 3,096
 New London, Connecticut, U.S.A. (track C), 3,087
 New York, New York, U.S.A. (track A), 3,191
 New York, New York, U.S.A. (track B), 3,184
 New York, New York, U.S.A. (tracks C and D), 3,176
 New York, New York, U.S.A. (low power, October–April), 3,667
 New York, New York, U.S.A. (low power, May–September), 3,392
 Nice, France, 788
 Norfolk, Virginia, U.S.A. (direct), 3,335
 Norfolk, Virginia, U.S.A. (track A), 3,339
 Norfolk, Virginia, U.S.A. (track B), 3,336
 Norfolk, Virginia, U.S.A. (track C), 3,339
 Novorossiysk, U.S.S.R. (via Corinth Canal), 2,260
 Novorossiysk, U.S.S.R. (south of Greece), 2,277
 Odessa, U.S.S.R. (via Corinth Canal), 2,152
 Odessa, U.S.S.R. (south of Greece), 2,169
 Olbia, Sardinia, 828
 Oran, Algeria, 252

Palermo, Sicily, 940
 Palma, Balearic Islands, 471
 Paphos, Cyprus, 1,872
 Paramaribo, Surinam, 3,275
 Patrai, Greece, 1,350
 Pescara, Italy, 1,515
 Philadelphia, Pennsylvania, U.S.A. (track A), 3,330
 Philadelphia, Pennsylvania, U.S.A. (track B), 3,323
 Philadelphia, Pennsylvania, U.S.A. (track C), 3,319
 Piraievs, Greece (via Corinth Canal), 1,451
 Piraievs, Greece (south of Greece), 1,508
 Ploce, Yugoslavia, 1,487
 Pollenza, Balearic Islands, 525
 Ponta Delgada, Azores, 964
 Port au Prince, Haiti, 3,757
 Port of Spain, Trinidad, 3,403
 Port St. Louis du Rhone, France, 703
 Port Vendres, France, 633
 Porto di Licata, Sicily, 958
 Porto di Manfredonia, Italy, 1,419
 Porto di Milazzo, Sicily, 1,025
 Porto di Reggio Calabria, Sicily, 1,052
 Porto Empedocle, Sicily, 937
 Porto, Portugal, 432
 Porto Grande, Cape Verde Islands, 1,539
 Porto Vecchio di Piombino, Italy, 897
 Pozzuoli, Italy, 997
 Praia, Bahia Praia, Tereira, Azores, 1,034
 Preveza, Greece, 1,319
 Providence, Rhode Island (track A), 3,096
 Providence, Rhode Island (track B), 3,090
 Providence, Rhode Island, U.S.A. (track C), 3,081
 Pula, Yugoslavia, 1,628
 Puerto de Pasajes, Spain, 894
 Qabis, Tunisia, 1,073
 Quiberon, France, 932
 Qutdligssat, Greenland, 2,953
 Recife, Brazil, 3,116
 Rethimnon, Crete, 1,485
 Reykjavik, Iceland, 1,905
 Rijeka, Yugoslavia, 1,648
 Rio de Janeiro, Brazil, 4,180
 Ritenbenk, Greenland, 2,982
 Rodhos, Rodhos, 1,668
 Rostov-na-Donu, U.S.S.R. (via Corinth Canal), 2,441
 Rostov-na-Donu, U.S.S.R. (south of Greece), 2,458
 Rota, Spain, 70
 St. John's, Canada, 2,182
 St. Louis, Senegal, 1,436

*JUNCTION POINT.—See Preface for use of junction points.

St. Raphael, France, 763
 Salamis, Greece, 1,520
 Salerno, Italy, 1,018
 Salvador, Brazil, 3,516
 San Juan, Puerto Rico, 3,336
 San Sebastian, Spain, 892
 Sant Antioco Ponti, Sardinia, 715
 Santa Cruz de Tenerife, Canary Islands, 697
 Santo Domingo, Dominican Republic, 3,549
 Santos, Brazil, 4,378
 Sarande, Albania, 1,311
 Savona, Italy, 852
 Sayda, Lebanon, 2,035
 Scoresbysund, Greenland, 2,271
 Sete, France, 684
 Setubal, Portugal, 287
 Sevastopol, U.S.S.R. (via Corinth Canal), 2,105
 Sevastopol, U.S.S.R. (south of Greece), 2,122
 Seydhisfjordhur, Iceland, 1,899
 Sfax, Tunisia, 1,043
 Shengjin, Albania, 1,382
 Sibenik, Yugoslavia, 1,522
 Sidi Ifni, Ifni, 472
 Siracusa, Sicily, 1,054
 Skikda, Algeria, 629
 Soudha, Ormos Soudhas, Crete, 1,479
 Sousse, Tunisia, 909
 Split, Yugoslavia, 1,507
 Sukkertoppen, Greenland, 2,547
 Sud, Lebanon, 2,032
 Taormina, Turkey, 1,075
 Tarabulus, Lebanon, 2,047
 Tarabulus, Libya, 1,093
 Taranto, Italy, 1,268
 Tarragona, Spain, 501
 Terracina, Italy, 974
 Thessaloniki, Greece (via Corinth Canal), 1,699
 Thessaloniki, Greece (south of Greece), 1,716
 Thule, Greenland, 3,299
 Toulon, France, 722
 Trapani, Sicily, 896
 Trieste, Free Territory, 1,682
 Tubruq, Libya, 1,534
 Tunis, Tunisia, 820
 Upernivik, Greenland, 3,011
 Valencia, Spain, 403
 Valletta, Malta, 1,005
 Venezia, Italy, 1,691
 Viana do Castelo, Portugal, 472
 Viareggio, Italy, 898
 Vigo, Spain, 504
 Vila Rial de Santo Antonio, Portugal, 113
 Villa Cisneros, Spanish Sahara, 923
 Villa do Porto, Azores, 963

Villa San Giovanni, Italy, 1,047
 Villa Sanjurjo, Morocco, 106
 Villagarcia, Spain, 526
 Villefranche, France, 789
 Vlores, Albania, 1,311
 Volos, Greece (via Corinth Canal), 1,640
 Volos, Greece (south of Greece), 1,657
 Washington, D.C., U.S.A. (track A), 3,475
 Washington, D.C., U.S.A. (track B), 3,472
 Washington, D.C., U.S.A. (direct), 3,471
 Willemstad, Curacao, 3,685
 Wilmington, North Carolina, U.S.A. (track A), 3,524
 Yumurtalik, Turkey, 1,672
 Zadar, Yugoslavia, 1,590

STRAITS OF FLORIDA*

(24°25'00" N., 83°00'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 3,887
 Bishop Rock, England (track B), 3,870
 Bishop Rock, England (track C), 3,842
 Cape of Good Hope, Republic of South Africa, 6,784
 Fastnet, Ireland (track A), 3,880
 Fastnet, Ireland (track B), 3,851
 Fastnet, Ireland (track C), 3,795
 Inishtrahull, Ireland (track A), 3,911
 Inishtrahull, Ireland (track B), 3,884
 Inishtrahull, Ireland (track C), 3,825
 Montreal, Canada (via Cabot Strait), 2,563
 Montreal, Canada (via Strait of Canso), 2,467
 Pentland Firth, Scotland (track A), 4,220
 Pentland Firth, Scotland (track B), 4,174
 Pentland Firth, Scotland (track C), 4,073
 Punta Arenas, Chile (east of South America), 6,829
 Strait of Gibraltar, 4,024

Ports

Abraham Bay, Bahamas, 593
 Accra, Ghana (via Northwest Providence Channel), 5,016
 Alvaro Obregon, Mexico, 678
 Angmagssalik, Greenland (direct), 3,311
 Angmagssalik, Greenland (via 75 miles off Kap Farvel), 3,325

Antilla, Cuba, 491
 Argentia, Canada, 2,050
 Arkhangelsk, U.S.S.R., 5,208
 Bahia de Samana, Dominican Republic, 864
 Baltimore, Maryland, U.S.A., 1,115
 Banes, Cuba, 483
 Baracoa, Cuba, 540
 Basse-Terre, Guadeloupe, 1,317
 Belem, Brazil, 2,694
 Bordeaux, France (track A), 4,284
 Bordeaux, France (track B), 4,264
 Bordeaux, France (tracks C and D), 4,234
 Boston, Massachusetts, U.S.A., 1,440
 Brest, France (track A), 3,968
 Brest, France (track B), 3,955
 Brest, France (track C), 3,933
 Bridgetown, Barbados, 1,511
 Brunswick, Georgia, U.S.A., 548
 Buenos Aires, Argentina, 5,763
 Cadiz, Spain, 3,992
 Caibarien, Cuba, 252
 Cap Haitien, Haiti, 604
 Cape Town, Republic of South Africa, 6,778
 Cardenas, Cuba, 140
 Castries, St. Lucia, 1,409
 Cayenne, French Guiana (via Mona Passage), 2,177
 Charleston, South Carolina, U.S.A., 644
 Charlotte Amalie, Virgin Islands, 1,087
 Cockburn Town, Bahamas, 615
 Corpus Christi, Texas, U.S.A., 803
 Dakar, Senegal (via Northwest Providence Channel), 3,768
 Douala, Cameroon, 5,526
 Elizabeth Harbor, Bahamas, 544
 Exuma Harbor, Bahamas, 637
 Fort de France, Martinique, 1,389
 Fort Liberte, Haiti, 692
 Freetown, Sierra Leone, 4,137
 Funchal, Madeira Island, 3,532
 Galveston, Texas, U.S.A., 698
 Georgetown, British Guiana (via Mona Passage), 1,869
 Gibara, Cuba, 447
 Grand Turk, Grand Turk Island, 721
 Great Harbor, Culebra Island, 1,068
 Guantanamo, Cuba (via Windward Passage), 638
 Guiria, Venezuela, 2,099
 Gulfport, Mississippi, U.S.A., 494
 Habana, Cuba, 87
 Halifax, Canada, 1,642
 Hamilton, Bermuda, 1,166
 Hopetown, Bahamas, 415
 Horta, Azores, 2,913
 Isabela, Cuba, 195
 Isabel Segunda, Isla de Vieques, 1,064

*JUNCTION POINT.—See Preface for use of junction points.

Ivigtut, Greenland, 2,969
 Jacksonville, Florida, U.S.A., 523
 Jacmel, Haiti, 802
 Key West, Florida, U.S.A., 73
 Kingston, Jamaica (via Windward Passage), 802
 La Guaira, Venezuela (via Windward Passage), 1,331
 Lagos, Nigeria, 5,225
 Lake Charles, Louisiana, U.S.A., 677
 Las Palmas de Gran Canaria, Canary Islands, 3,713
 Les Cayes, Haiti, 738
 Lisboa, Portugal, 3,831
 Maracaibo, Venezuela (via Windward Passage), 1,205
 Mariel, Cuba, 86
 Marshall, Liberia (via Providence Channel), 4,349
 Matagorda Bay, Texas, U.S.A., 754
 Matanzas, Cuba, 119
 Miami, Florida, U.S.A., 217
 Miller Anchorage, Bahamas, 495
 Mobile, Alabama, U.S.A., 471
 Montego Bay, Jamaica, 642
 Montecristi, Dominican Republic, 711
 Montevideo, Uruguay, 5,644
 Nassau, Bahamas, 393
 New Orleans, Louisiana, U.S.A. (via South Pass), 524
 New York, New York, U.S.A., 1,197
 Nicaro, Cuba, 488
 Norfolk, Virginia, U.S.A., 997
 Nuevitas, Cuba, 386
 Oranjestad, St. Eustatius, 1,207
 Paramaribo, Surinam (via Mona Passage), 2,014
 Pensacola, Florida, U.S.A., 431
 Philadelphia, Pennsylvania, U.S.A., 1,168
 Pointe A pitre, Guadeloupe (via Virgin Passage), 1,347
 Pointe A pitre, Guadeloupe (via Mona Passage), 1,348
 Ponce, Puerto Rico, 1,020
 Ponta Delgada, Azores, 3,052
 Porlamar, Venezuela, 1,450
 Port Antonio, Jamaica, 751
 Port Arthur, Texas, U.S.A., 677
 Port au Prince, Haiti, 701
 Port of Spain, Trinidad (via Mona Passage), 1,533
 Port Plata, Dominican Republic, 764
 Portland, Maine, U.S.A., 1,485
 Porto Grande, Cape Verde Islands, 3,314
 Portsmouth, New Hampshire, U.S.A., 1,461
 Prala, Bahia Prala, Terceira, Azores, 3,017
 Puerto Cabello, Venezuela, 1,299

Puerto Cayo Moa, Cuba, 510
 Puerto de Hierro, Venezuela, 2,086
 Puerto Manati, Cuba, 397
 Puerto Mexico, Mexico, 757
 Puerto Padre, Cuba, 409
 Puerto Siboney, Cuba, 659
 Puerto Tanamo, Cuba, 489
 Puerto Vita, Cuba, 444
 Recife, Brazil, 3,590
 Reykjavik, Iceland, 3,530
 Rio de Janeiro, Brazil, 4,662
 Rio Yateras, Cuba, 622
 Roosevelt Roads, Puerto Rico, 1,063
 St. Georges, Grenada, 1,453
 St. John, Canada, 1,611
 St. John's Canada, 2,128
 St. Marc, Haiti, 673
 Salvador, Brazil, 3,981
 San Juan, Puerto Rico, 1,017
 Sanchez, Dominican Republic, 893
 Santa Barbara de Samana, Dominican Republic, 867
 Santa Cruz de Tenerife, Canary Islands, 3,614
 Santa Lucia, Cuba, 120
 Santiago de Cuba, Cuba (via Windward Passage), 676
 Santo Domingo, Dominican Republic (via Mona Passage), 1,036
 Santo Domingo, Dominican Republic (via Windward Passage), 986
 Santos, Brazil, 4,849
 Savannah, Georgia, U.S.A., 603
 Tampa, Florida, U.S.A., 232
 Tampico, Mexico, 832
 Tuxpan, Mexico, 792
 Vigo, Spain (track A), 3,811
 Vigo, Spain (track B), 3,809
 Willemstad, Curacao, 1,184
 Wilmington, North Carolina, U.S.A., 735

STRALSUND, GERMANY

(54°18'30" N., 13°05'45" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 104
 Skagens Odde, Denmark, 226

Ports

Gdynia, Poland, 245
 Kobenhavn, Denmark, 81
 Stockholm, Sweden, 423

SUAKIN, SUDAN

(19°06'47" N., 37°20'21" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 4,538

Port Said, U.A.R., 813
 Singapore, 4,251

Ports

Aden, Aden Protectorate, 631

SU-AO CHIANG, TAIWAN

(24°36'00" N., 121°52'00" E.) to:

Ports

Ching-tao, China, 756
 Hong Kong, B.C.C., 554
 Inchon, Korea, 823
 Manila, Philippines, 684
 Shang-hai, China, 498

SUBIC BAY, PHILIPPINES

(14°43'11" N., 120°11'46" E.)

Subtract 8½ miles from Olongapo distances.

SUEZ, U.A.R. See Bur Ibrahim.

SUKARNAPURA, INDONESIA

(2°32'30" N., 140°42'30" E.) to:

Junction Points*

Lombok Strait, Indonesia, 1,702
 Singapore, 2,510
 Sunda Strait, Indonesia, 2,242

Ports

Apra, Guam, 1,010
 Djakarta, Indonesia, 2,187
 Honolulu, Hawaii, U.S.A., 3,878
 Sorido, Indonesia, 311
 Sorong, New Guinea, 637

SUKKERTOPPEN, GREENLAND

(65°24'36" N., 52°54'12" W.) to:

Junction Points*

Pentland Firth, Scotland, 1,700
 Strait of Gibraltar, 2,547

Ports

Churchill, Canada, 1,341
 Reykjavik, Iceland, 1,146
 St. John's, Canada, 1,075

SULIMA, SIERRA LEONE

(6°57'00" N., 12°35'00" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 3,060
 Ushant, France, 2,739

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Dakar, Senegal, 589
Takoradi, Ghana, 703

SUNDA STRAIT, INDONESIA*

(6°04'00" S., 105°50'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,815
Cape of Good Hope, Republic of South Africa, 5,100
Lombok Strait, Indonesia (north of Java), 677
Port Said, U.A.R. (via One and Half Degree Channel, May–September), 5,322
Port Said, U.A.R. (via Eight Degree Channel, October–April), 5,211
Singapore (via Selat Bangka and Selat Berhala), 532
Wetar Passage, Indonesia, 1,330

Ports

Adelaide, Australia, 2,980
Aden, Aden Protectorate (via Eight Degree Channel, October–April), 3,824
Aden, Aden Protectorate (via One and Half Degree Channel, May–September), 3,935
Aleksandrovsk, U.S.S.R., 3,961
Antsirana, Malagasy Republic, 3,366
Balikpapan, Borneo, 837
Bandjermasin, Borneo, 775
Belawan, Indonesia, 870
Bombay, India, 2,664
Calcutta, India, 2,140
Chan Chiang, China, 1,710
Chang-kan, China, 1,588
Chinnampo, Korea, 2,974
Colombo, Ceylon, 1,781
Darwin, Australia (south of Java), 1,623
Djakarta, Indonesia, 77
Flying Fish Cove, Christmas Island, Indian Ocean, 281
Fremantle, Australia, 1,691
Geraldton, Australia, 1,494
Hong Kong, B.C.C., 1,807
Inchon, Korea, 2,913
Krung Thep, Thailand, 1,292
Los Angeles, California, U.S.A. (via Makassar Strait), 7,976
Makasar, Celebes, 861
Malacca, Malaysia, 619
Manila, Philippines, 1,578
Mokpo, Korea, 2,760
Padang, Indonesia, 488
Palembang, Indonesia, 362
Petropavlovsk, U.S.S.R., 4,574

Port Refuge, Cocos Island, 647
Pusan, Korea, 2,855
Qui Nhon, Vietnam, 1,241
Rapid Bay, Australia, 2,946
Sabang, Indonesia, 1,103
Seletar, Malaya, 533
Semarang, Indonesia, 297
Shang-hai, China (via Pai-chieh Hsia, Steep Island Pass, west of Macclesfield Bank, east of South Natura Island and through Selat Gaspar), 2,535
Sihanoukville, Cambodia, 1,096
Simons Bay, Republic of South Africa, 5,058
Stenhouse Bay, Australia, 2,892
Sukarnapura, Indonesia, 2,242
Surabaya, Indonesia, 450
Tarakan, Indonesia, 1,191
Tanjung Uban, Indonesia, 502
Tjilatjap, Indonesia, 345
Tjirebon, Indonesia, 211
Victoria, North Borneo, 948
Vladivostok, U.S.S.R., 3,357
Wonsan, Korea, 3,161

SUNDERLAND, ENGLAND

(54°54'45" N., 1°22'00" W.) to:

Junction Points*

Bishop Rock, England, 605
Pentland Firth, Scotland, 304

Ports

London, England, 312
Rotterdam, Netherlands, 286
Southampton, England, 400

SUNDSVALL, SWEDEN

(62°23'12" N., 17°21'30" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 684
Skagens Odde, Denmark, 745

Ports

Gdynia, Poland, 507
Leningrad, U.S.S.R., 507
Stockholm, Sweden, 222

SUR, LEBANON

(33°18'00" N., 35°12'00" E.) to:

Junction Points*

Port Said, U.A.R., 191
Strait of Gibraltar, 2,032

Ports

Alexandria, U.A.R., 309

Haifa, Israel, 33
Iskenderun, Turkey, 218

SURABAJA, INDONESIA

(7°12'00" S., 112°44'00" E.) to:

Junction Points*

Lombok Strait, Indonesia (north of Madura), 275
Lombok Strait, Indonesia (south of Madura), 232
Singapore, 763
Sunda Strait, Indonesia, 450
Torres Strait, Australia (north of Madura and via Wetar Passage), 1,814
Wetar Passage, Indonesia (north of Madura), 928
Wetar Passage, Indonesia (south of Madura), 880

Ports

Ambon, Indonesia, 980
Apra, Guam, 2,334
Belawan, Indonesia, 1,132
Ching-tao, China, 2,864
Dutch Harbor, Alaska, U.S.A., 5,555
Fremantle, Australia (north of Madura and via Bali Strait), 1,674
Fremantle, Australia (south of Madura and via Bali Strait), 1,627
Hai-kou, Hai-nan Tao, China, 1,835
Hong Kong, B.C.C., 1,925
Honolulu, Hawaii, U.S.A., 5,598
Hsia-men, China, 2,121
Kodiak, Alaska, U.S.A., 6,086
Kuang-chou, China, 1,977
Los Angeles, California, U.S.A., 7,622
Malacca, Malaysia, 881
Malakal, Palau Islands, 1,656
Manila, Philippines, 1,540
Midway Island, 4,632
Palembang, Indonesia, 638
Palmyra Island, 5,263
Sai Gon, Vietnam, 1,206
San Diego, California, U.S.A., 7,691
San Francisco, California, U.S.A., 7,343
Seattle, Washington, U.S.A., 7,162
Semarang, Indonesia, 196
Shang-hai, China, 2,626
Sitka, Alaska, U.S.A., 6,564
Ta-ku, China, 3,174
Teluk Kau, Halmahera, 1,604
Truk, Caroline Islands, 2,623
Vinh Cam Ranh, Vietnam, 1,251
Vladivostok, U.S.S.R., 3,357
Wake Island, 3,641
Yin-hsien, China (via Shih-peng Chiang), 2,492
Yokohama, Japan, 3,092

*JUNCTION POINT.—See Preface for use of junction points.

SURGIDERO DE BATABANO, CUBA
(22°40'00" N., 82°17'00" W.) to:**Junction Points***

Panama, Panama, 970
Yucatan Channel, 229

Ports

Barranquilla, Colombia, 944
Kingston, Jamaica, 595
Santiago de Cuba, Cuba, 580

SUSAH, TUNISIA. See Sousse.

SUVA, FIJI ISLANDS

(18°08'00" S., 178°25'00" E.) to:

Junction Points*

Panama, Panama, 6,325
Punta Arenas, Chile, 5,444
Torres Strait, Australia (north of Cumberland and Maewo to Kandavu Passage, Raine Island entrance), 2,212
Wilson Promontory, Australia, 2,088

Ports

Apia, Samoa, 647
Apra, Guam, 2,784
Auckland, New Zealand, 1,149
Avarua, Cook Islands, 1,256
Baie du Controleur, Marquesas, 2,496
Baker Island, 1,202
Brisbane, Australia, 1,548
Butaritari, Gilbert Islands, 1,462
Callao, Peru, 5,995
Ching-tao, China, 4,662
Dutch Harbor, Alaska, U.S.A., 4,493
Guayaquil, Ecuador, 6,067
Hai-kou, Hai-nan Tao, 4,694
Hobart, Tasmania, 2,198
Hong Kong, B.C.C., 4,541
Honolulu, Hawaii, U.S.A., 2,776
Hsia-men, China, 4,389
Kowiak, Alaska, U.S.A., 4,853
Kuang-chou, China, 4,596
Los Angeles, California, U.S.A., 4,788
Malakal, Palau Islands, 3,041
Manila, Philippines, 4,048
Midway Island, Pacific, 2,872
Noumea, New Caledonia, 734
Nukualofa, Tonga Islands, 416
Ocean Island, 1,207
Pago Pago, American Samoa, 688
Palmyra Island, 1,864
Papeete, Society Islands, 1,838
Petrovsk, U.S.S.R., 4,460
Raoul Island, Kermadec Islands, 701
Sai Gon, Vietnam, 4,679
San Diego, California, U.S.A., 4,804

San Francisco, California, U.S.A., 4,749

Seattle, Washington, U.S.A., 5,162
Seward, Alaska, U.S.A., 5,003
Shang-hai, China, 4,467
Sitka, Alaska, U.S.A., 5,112
Sydney, Australia, 1,738
Ta-ku, China, 4,898
Teluk Kau, Halmahera, 3,251
Truk, Caroline Islands, 2,231
Valparaiso, Chile, 5,759
Vladivostok, U.S.S.R., 4,626
Wake Island, 2,501
Wellington, New Zealand, 1,476
Wotje Island, Marshall Islands, 1,880
Yap, Caroline Islands, 2,933
Yin-hsien, China (via Shih-peng Chiang), 4,408
Yokohama, Japan, 3,967

SVENDBORG, DENMARK

(55°03'45" N., 10°37'30" E.)

Add 12 miles to Faborg distances.

SWAKOPMUND, REPUBLIC OF SOUTH AFRICA

(22°41'00" S., 14°30'30" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 743
Ushant, France, 5,156

Ports

Cape Town, Republic of South Africa, 719
Matadi, Republic of the Congo, 1,144

SWAN ISLAND

(17°24'30" N., 83°57'00" W.) to:

Junction Points*

Panama, Panama, 605
Yucatan Channel, 273

Ports

Mariel, Cuba, 437
Puerto Cortes, Honduras, 254

SWANSEA, WALES

(51°37'00" N., 3°55'00" W.) to:

Junction Points*

Bishop Rock, England, 155
Fastnet, Ireland, 217
Pentland Firth, Scotland, 578

Ports

Barrow in Furness, England, 242
Cardiff, Wales, 46
Fishguard, Wales, 100
Holyhead, Wales, 171
Liverpool, England, 236

SWATOW, CHINA. See Shan-tou.

SWEEPER COVE, ALASKA, U.S.A.

(51°51'30" N., 176°38'00" W.) to:

Junction Points*

Panama, Panama, 5,586

Ports

Dutch Harbor, Alaska, U.S.A., 407
Honolulu, Hawaii, U.S.A., 1,945
Port Hueneme, California, U.S.A., 2,686
Victoria, Canada, 2,044

SWINEMUNDE, POLAND. See Swinoujscie.

SWINOUJSCIE, POLAND

(53°55'00" N., 14°17'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 186
Skagens Odde, Denmark (via Store Baelt), 379
Skagens Odde, Denmark (via The Sound), 275

Ports

Horsens, Denmark, 268
Kalundborg, Denmark, 175
Koge, Denmark, 156
Kolding, Denmark, 253
Korsor, Denmark, 239
Kyndbyvaerkets, Denmark, 195
Limhamn, Sweden, 128
Masnedssund, Denmark, 193
Nakskov, Denmark, 190
Odense, Denmark, 293
Oslo, Norway (via Store Baelt), 503
Oslo, Norway (via The Sound), 397
Randers, Denmark, 266
Sonderborg, Denmark, 215

SYDNEY, AUSTRALIA

(33°51'30" S., 151°13'00" E.) to:

Junction Points*

Panama, Panama, 7,674
Punta Arenas, Chile (via Lat. 60° S.), 5,398

*JUNCTION POINT.—See Preface for use of junction points.

Punta Arenas, Chile (via Lat. 49° S.), 5,848
Wilson Promontory, Australia, 440

Ports

Apia, Samoa, 2,355
Apra, Guam, 3,006
Auckland, New Zealand, 1,280
Avarua, Cook Islands, 2,690
Baker Island, 2,752
Brisbane, Australia, 529
Burnie Harbor, Australia, 525
Ching-tao, China, 4,871
Dutch Harbor, Alaska, U.S.A., 5,761
Guayaquil, Ecuador, 7,268
Hakodate, Japan, 4,688
Hobart, Tasmania, 638
Honolulu, Hawaii, U.S.A., 4,420
Hsia-men, China (via Vitiaz Strait), 4,437
Jaluit, Marshall Islands, 2,623
Kobe, Japan, 4,384
Kodiak, Alaska, U.S.A., 6,222
Launceston, Tasmania, 514
Lautoka Harbor, Fiji Islands, 1,732
Lele, Caroline Islands, 2,503
Levuka, Fiji Islands, 1,779
Los Angeles, California, U.S.A., 6,511
Lyttelton, New Zealand, 1,419
Midway Island, 4,138
Nagasaki, Japan, 4,439
Nelson, New Zealand, 1,166
Nome, Alaska, U.S.A., 6,280
Noumea, New Caledonia, 1,069
Ocean Island, 2,233
Omura, Bonin Islands, 3,860
Pago Pago, American Samoa, 2,377
Palmyra Island, 3,561
Papeete, Society Islands, 3,308
Ponape, Caroline Islands, 2,514
Port Augusta, Australia, 1,164
Portland, Oregon, U.S.A., 6,737
Prince Rupert, Canada, 6,671
Rabaul, New Britain, 1,844
Raoul Island, Kermadec Islands, 1,600
Saipan, Mariana Islands, 3,077
San Diego, California, U.S.A., 6,530
San Francisco, California, U.S.A., 6,448
Seattle, Washington, U.S.A., 6,810
Selwyn Bay, Solomon Islands, 1,567
Seward, Alaska, U.S.A., 6,373
Shang-hai, China (west of New Ireland), 4,642
Shang-hai, China (via Vitiaz Strait), 4,636
Shimonoseki, Japan, 4,453
Sitka, Alaska, U.S.A., 6,595
Suva, Fiji Islands, 1,738
Ta-ku, China, 5,135

Ta-lien, China (via Vitiaz Strait), 4,976
Ta-lien, China (west of New Ireland), 5,015
Talomako, New Hebrides, 1,471
Tinian, Mariana Islands, 3,064
Truk, Caroline Islands, 2,543
Valparaiso, Chile (via Lat. 49° S.), 6,294
Vladivostok, U.S.S.R., 5,105
Wake Island, 3,346
Wallaroo, Australia, 1,084
Wellington, New Zealand, 1,234
Yin-hsien, China (via Shih-peng Chiang), 4,574
Yokohama, Japan, 4,330

SYDNEY, CANADA

(46°08'30" N., 60°12'00" W.) to:

Ports

Boston, Massachusetts, U.S.A., 597
Buenos Aires, Argentina, 5,749
Cape Town, Republic of South Africa, 6,425
Castries, St. Lucia, 1,967
Colon, Panama, 2,482
Kingston, Jamaica, 1,982
La Guaira, Venezuela, 2,215
Liverpool, Canada, 293
New York, New York, U.S.A., 808
Norfolk, Virginia, U.S.A., 996
Parrsboro, Canada, 545
Philadelphia, Pennsylvania, U.S.A., 958
Port of Spain, Trinidad, 2,189
Portland, Maine, U.S.A., 556
Porto Grande, Cape Verde Islands, 2,503
Portsmouth, New Hampshire, U.S.A., 576
Rio de Janeiro, Brazil, 4,648
St. John, Canada, 492
Salvador, Brazil, 3,967
San Juan, Puerto Rico, 1,728
Santo Domingo, Dominican Republic, 1,867
Recife, Brazil, 3,553
Yarmouth, Canada, 416

SYRACUSE, SICILY. See Siracusa.

SZCZECIN, POLAND

(53°26'00" N., 14°34'30" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 222
Skagens Odde, Denmark (via Store Baelt), 410

Ports

Aarhus, Denmark, 268
Gdansk, Poland, 240
Halmstad, Sweden, 227
Landskrona, Sweden, 170
Oslo, Norway (via The Sound), 431

TABOU, IVORY COAST. See Tabu.

TABU, IVORY COAST.

(4°24'35" N., 7°21'00" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,751
Ushant, France, 3,097

Ports

Dakar, Senegal, 947
Takoradi, Ghana, 346

TACLOBAN, PHILIPPINES

(11°15'30" N., 125°00'00" E.) to:

Ports

Batangas, Philippines, 293
Jolo, Philippines, 442
Yap, Caroline Islands, 790
Zamboanga, Philippines, 385

TACOMA, WASHINGTON, U.S.A.

(47°16'00" N., 122°26'00" W.)

Add 21 miles to Seattle distances.

TAHITI, SOCIETY ISLANDS. See Papeete.

TAIO HAE, MARQUESAS

(8°56'00" S., 140°05'00" W.) to:

Junction Points*

Panama, Panama, 3,826

Ports

Apia, Samoa, 1,886
Apra, Guam, 4,698
Honolulu, Hawaii, U.S.A., 2,102
Los Angeles, California, U.S.A., 2,858
Noumea, New Caledonia, 3,183
Palmyra Island, 1,596
Papeete, Society Islands, 761
San Francisco, California, U.S.A., 2,987

*JUNCTION POINT.—See Preface for use of junction points.

TAIO HAE BAIE, MARQUESAS. See Taio Hae.

TAI-TUNG CHIANG, TAIWAN
(22°44'50" N., 121°09'12" E.) to:

Ports

Ching-tao, China, 870
Hong Kong, B.C.C., 440
Inchon, Korea, 937
Pusan, Korea, 860
Shang-hai, China, 612

TAKAO KO, TAIWAN. See Kao-Hsiung Chiang.

TAKORADI, GHANA
(4°53'00" N., 1°44'30" W.) to:

Ports

Bolama, Portuguese Guinea, 1,100
Freetown, Sierra Leone, 859
Greenville, Liberia, 461
Kribi, Cameroon, 704
Lome, Togo, 200
Monrovia, Liberia, 597
Norfolk, Virginia, U.S.A., 4,620
Pointe Noire, Gabon, 1,001
Port Buchanan, Liberia, 197
Port of Spain, Trinidad, 3,632
Porto Grande, Cape Verde Islands, 1,673
River Cess, Liberia, 508
Santa Cruz de Tenerife, Canary Islands, 2,119
Sassandra, Ivory Coast, 262
Sulima, Sierra Leone, 703
Tabu, Ivory Coast, 346
Tema, Ghana, 117
Willemstad, Curacao, 4,040

TA-KU, CHINA
(38°59'15" N., 117°40'45" E.) to:

Junction Points*

Panama, Panama (via Tsugaru Kaikyo), 8,786
Panama, Panama (via Osumi Kaikyo), 9,002
Punta Arenas, Chile, 10,280
Singapore, 2,770

Ports

Aleksandrovsk, U.S.S.R. (via Maenggol Sudo), 1,807
Apra, Guam, 2,133
Auckland, New Zealand (via Vitiaz Strait), 5,648

Cebu, Philippines (via San Bernardino Strait), 1,907
Chi-lung Chiang, Taiwan, 1,013
Ching-tao, China, 436
Chin-huang-tao, China, 131
Chinnampo, Korea, 369
Darwin, Australia, 3,363
Djakarta, Indonesia, 3,088
Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,594
Esutoru, U.S.S.R., 1,708
Hakodate, Japan, 1,385
Hong Kong, B.C.C., 1,418
Honolulu, Hawaii, U.S.A. (via Shimonoseki Kaikyo), 4,628
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,677
Hsia-men, China, 1,169
Hu-lu Tao, China, 214
Iloilo, Philippines (via San Bernardino Strait), 1,929
Inchon, Korea, 465
Kobe, Japan, 1,034
Kuang-chou, China, 1,501
Lo-hsing-ta Mao-ti, China, 1,029
Lu-shun, China, 175
Manila, Philippines (east of Taiwan), 1,722
Manila, Philippines (via Formosa Strait), 1,732
Mokpo, Korea (south of Kasa Do), 536
Nagasaki, Japan, 754
Nakagusuku, Ryukyu Islands, 1,026
Nikolayevsk, U.S.S.R., 1,961
Noumea, New Caledonia, 4,667
Pago Pago, American Samoa, 5,194
Papeete, Society Islands, 6,281
Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,419
Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,444
Pusan, Korea (via Maenggol Sudo), 702
Rabaul, New Britain, 3,294
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,615
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,856
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 5,290
Seattle, Washington, U.S.A. (via La Perouse Strait, and north of Aleutian Islands), 5,286
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and south of Aleutian Islands), 5,351
Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,596
Shang-hai, China, 720

Shan-tou, China, 1,274
Shimonoseki, Japan, 790
Surabaja, Indonesia, 3,174
Suva, Fiji Islands, 4,898
Sydney, Australia (via Vitiaz Strait), 5,135
Ta-lien, China, 207
Tan-shui, Taiwan, 1,012
Tien-ching, China, 48
Valparaiso, Chile (via Shimonoseki Kaikyo), 10,482
Vladivostok, U.S.S.R., 1,212
Wonsan, Korea, 1,007
Yen-tai, China, 205
Ying-kou, China, 251
Yokohama, Japan (via Osumi Kaikyo), 1,394

TALARA, PERU
(4°34'30" S., 81°17'15" W.) to:

Junction Points*

Panama, Panama, 828

Ports

Acapulco, Mexico, 1,696
Arica, Chile, 1,103
Callao, Peru, 534
Guayaquil, Ecuador, 180
Honolulu, Hawaii, U.S.A., 4,806
Pimentel, Peru, 182
San Francisco, California, U.S.A., 3,494

TALCAHUANO, CHILE
(36°42'00" S., 73°06'00" W.) to:

Junction Points*

Panama, Panama, 2,805
Punta Arenas, Chile, 1,225

Ports

Acapulco, Mexico, 3,558
Antofagasta, Chile, 802
Arica, Chile, 1,108
Caldera, Chile, 602
Callao, Peru, 1,508
Coquimbo, Chile, 428
Corinto, Nicaragua, 3,062
Corral, Chile, 229
Esmeraldas, Ecuador, 2,368
Guayaquil, Ecuador, 2,135
Guaymas, Mexico, 4,428
Iquique, Chile, 1,008
Lota, Chile, 50
Mollendo, Peru, 1,184
Monterey, California, U.S.A., 5,190
Pisco, Peru, 1,411
Puntarenas, Costa Rica, 2,879
Salina Cruz, Mexico, 3,414

*JUNCTION POINT.—See Preface for use of junction points.

San Blas, Mexico, 3,977
 San Diego, California, U.S.A., 4,869
 San Francisco, California, U.S.A., 5,270
 San Jose, Guatemala, 3,202
 Santa Barbara, California, U.S.A., 5,006
 Valparaiso, Chile, 241

TA-LIEN, China

(38°56'00" N., 121°39'00" E.) to:

Junction Points*

Panama, Panama (via Osumi Kaikyo), 8,843
 Panama, Panama (via Tsugaru Kaikyo), 8,627
 Punta Arenas, Chile, 10,121
 Singapore, 2,612

Ports

Aleksandrovsk, U.S.S.R., 1,648
 Apra, Guam, 1,974
 Auckland, New Zealand (west of New Ireland), 5,469
 Auckland, New Zealand (via Vitiaz Strait), 5,489
 Ching-tao, China, 277
 Chin-huang-tao, China, 145
 Chi-lung Chiang, Taiwan, 852
 Chinnampo, Korea, 180
 Darwin, Australia, 3,204
 Dutch Harbor, Alaska, U.S.A. (via La Perouse Strait), 3,435
 Dutch Harbor, Alaska, U.S.A. (via Tsugaru Kaikyo), 3,437
 Hakodate, Japan, 1,226
 Honolulu, Hawaii, U.S.A., 4,531
 Honolulu, Hawaii, U.S.A. (via Shimonoseki Kaikyo), 4,470
 Hsia-men, China, 1,008
 Inchon, Korea, 290
 Kobe, Japan, 877
 Kunsan, Japan, 94
 Lien-yun, China, 348
 Lo-hsing-ta Mao-ti, China, 871
 Manila, Philippines (east of Taiwan), 1,561
 Manila, Philippines (via Formosa Strait), 1,571
 Masan, Korea, 546
 Moji, Japan, 633
 Mokpo, Korea (via south of Kasa Do), 377
 Pago Pago, American Samoa, 5,035
 Petropavlovsk, U.S.S.R. (via La Perouse Strait), 2,260
 Petropavlovsk, U.S.S.R. (via Tsugaru Kaikyo), 2,285
 Portland, Oregon, U.S.A., 5,240

Pusan, Korea (via Maenggol Sudo), 543
 San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,697
 San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,456
 Seattle, Washington, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 5,127
 Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and north of Aleutian Islands), 5,131
 Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and south of Aleutian Islands), 5,192
 Seattle, Washington, U.S.A. (via Osumi Kaikyo and south of Aleutian Islands), 5,437
 Shang-hai, China, 560
 Shan-tou, China, 1,113
 Sydney, Australia (via Vitiaz Strait), 4,976
 Sydney, Australia (via west of New Ireland), 5,015
 Ta-ku, China, 207
 Tasa Do, Korea, 149
 Valparaiso, Chile (via Tokara Kaikyo), 10,366
 Valparaiso, Chile (via Shimonoseki Kaikyo), 10,324
 Vladivostok, U.S.S.R., 1,057
 Wonsan, Korea, 848
 Yokohama, Japan (via Osumi Kaikyo), 1,235

TALLINN, ESTONIA

(59°27'00" N., 24°46'30" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 603
 Skagens Odde, Denmark, 661

Ports

Gdynia, Poland, 392
 Leningrad, U.S.S.R., 189
 Stockholm, Sweden, 220

TALOMACO, NEW HEBRIDES. See Talomako.

TALOMAKO, NEW HEBRIDES

(15°11'30" S., 166°50'00" E.) to:

Ports

Apia, Samoa, 1,255
 Apra, Guam, 2,177
 Auckland, New Zealand, 1,420
 Brisbane, Australia, 1,132

Honolulu, Hawaii, U.S.A., 3,014
 Noumea, New Caledonia (west of Malekula and via Bougainville Strait), 524
 Rabaul, New Britain, 1,104
 Sydney, Australia, 1,471

TALTAL, CHILE

(25°24'00" S., 70°29'00" W.) to:

Junction Points*

Panama, Panama, 2,225

Ports

San Francisco, California, U.S.A., 4,838

TAMATAVE, MALAGASY REPUBLIC

(18°09'00" S., 49°25'30" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,055
 Port Said, U.A.R., 3,598
 Singapore, 3,675

Ports

Beira, Mozambique, 1,239
 Belawan, Indonesia, 3,342
 Bombay, India, 2,621
 Colombo, Ceylon, 2,351
 Darwin, Australia, 4,702
 Fremantle, Australia, 3,650
 Karachi, Pakistan, 2,788
 Lourenco Marques, Mozambique, 1,242
 Malacca, Malaysia, 3,560
 Penang, Malaysia, 3,387
 Port Louis, Mauritius, 474
 Sabang, Indonesia, 3,076
 Zanzibar, Zanzibar, 1,116

TAMPA, FLORIDA, U.S.A.

(27°56'30" N., 82°26'40" W.) to:

Junction Points*

Straits of Florida, 232
 Yucatan Channel, 404

Ports

Cartagena, Colombia, 1,295
 Colon, Panama, 1,216
 Habana, Cuba, 307
 Matanzas, Cuba (via Northwest Channel), 325
 Tampico, Mexico, 921
 Veracruz, Mexico, 925

*JUNCTION POINT.—See Preface for use of junction points.

TAMPICO, MEXICO

(22°12'30" N., 97°53'30" W.) to:

Junction Points*

Panama, Panama, 1,528
 Straits of Florida, 832
 Yucatan Channel, 716

Ports

Alvaro Obregon, Mexico, 372
 Apalachicola, Florida, U.S.A., 825
 Belize, British Honduras, 927
 Brunswick, Georgia, U.S.A., 1,387
 Campeche, Mexico, 430
 Carmen, Mexico, 401
 Cartagena, Colombia, 1,575
 Cienfuegos, Cuba, 1,009
 Colon, Panama, 1,485
 Corpus Christi, Texas, U.S.A., 366
 Galveston, Texas, U.S.A., 473
 Guantanamo, Cuba, 1,293
 Gulfport, Mississippi, U.S.A., 725
 Habana, Cuba, 864
 Jacksonville, Florida, U.S.A., 1,361
 Key West, Florida, U.S.A., 907
 Kingston, Jamaica, 1,252
 Matagorda Bay, Texas, U.S.A., 380
 Matanzas, Cuba, 914
 Mobile, Alabama, U.S.A., 750
 New Orleans, Louisiana, U.S.A. (via Southwest Pass), 711
 Pensacola, Florida, U.S.A., 759
 Port Arthur, Texas, U.S.A., 522
 Progreso, Mexico, 469
 Puerto Cortes, Honduras, 993
 Puerto Mexico, Mexico, 320
 San Juan del Norte, Nicaragua, 1,336
 Savannah, Georgia, U.S.A., 1,432
 Tampa, Florida, U.S.A., 921
 Tela, Honduras, 974
 Veracruz, Mexico, 218

TANAMO, CUBA, See Puerto Tanamo.

TANDJUNG UBAN, INDONESIA
 (1°04'00" N., 104°13'00" E.) to:

Junction Points*

Singapore, 27
 Sunda Strait, Indonesia, 502

Ports

Makasar, Celebes, 1,075
 Manila, Philippines, 1,328
 Sai Gon, Vietnam, 633

TANDJUNGPRIOK, INDONESIA.
 See Djakarta.

TANGA, TANGANYIKA

(5°04'00" S., 39°07'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,425
 Port Said, U.A.R., 3,068
 Singapore, 4,037

Ports

Aden, Aden Protectorate, 1,681
 Belawan, Indonesia, 3,704
 Darwin, Australia, 5,466
 Fremantle, Australia, 4,583
 Mombasa, Kenya, 69
 Penang, Malaysia, 3,749
 Zanzibar, Zanzibar, 75

TANGIER, MOROCCO

(35°47'00" N., 5°48'00" W.) to:

Ports

Casablanca, Morocco, 166
 Ceuta, Morocco, 29
 Dakar, Senegal, 1,483
 El Jadida, Morocco, 207
 Fedala, Morocco, 158
 Funchal, Madeira Island, 588
 Kenitra, Morocco, 115
 Larache, Morocco, 48
 Porto de Leixoes, Portugal, 436
 Porto Grande, Cape Verde Islands, 1,536
 Rabat, Morocco, 125
 Vigo, Spain, 516

TANG-KU, CHINA. See Ta-ku.

TAN-SHUI, TAIWAN

(25°11'00" N., 121°23'30" E.) to:

Junction Points*

Singapore, 1,800

Ports

Apra, Guam, 1,505
 Cebu, Philippines (via Pen-hu Shieh-tao and Balintang Channel), 1,006
 Djakarta, Indonesia, 2,094
 Hakodate, Japan, 1,384
 Hong Kong, B.C.C., 445
 Honolulu, Hawaii, U.S.A., 4,398
 Hsia-men, China, 194
 Iloilo, Philippines (via Peng-hu Shieh-tao and Balintang Channel), 1,028
 Inchon, Korea, 788
 Kobe, Japan (via Osumi Kaikyo), 933
 Kuang-chou, China, 528

Lo-hsing-ta Mao-ti, China, 127

Lu-shun, China, 859
 Manila, Philippines, 742
 Nagasaki, Japan, 636
 Petropavlovsk, U.S.S.R. (via Proliv Chetvertyy Kurilskiy and La Perouse Strait), 2,437
 San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,611
 San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,617
 Shang-hai, China, 446
 Shan-tou, China, 295
 Shimonoseki, Japan, 753
 Ta-ku, China, 1,012
 Vladivostok, U.S.S.R., 1,225
 Wei-hai-wel, China, 784
 Yen-tai, China, 818
 Yokohama, Japan (via Osumi Kaikyo), 1,146

TANSUI, TAIWAN. See Tan-Shui.

TAONGI, MARSHALL ISLANDS.
 See Pokak.

TAORMINA, SICILY

(37°50'00" N., 15°17'00" E.) to:

Junction Points*

Port Said, U.A.R., 933
 Strait of Gibraltar, 1,075

Ports

Napoli, Italy, 202
 Palermo, Sicily, 147
 Taranto, Italy, 211

TARABULUS, LEBANON

(34°29'37" N., 35°51'55" E.) to:

Junction Points*

Port Said, U.A.R., 268
 Strait of Gibraltar, 2,047

Ports

Haifa, Israel, 118
 Marseille, France, 1,613
 Sete, France, 1,672
 Venezia, Italy (via Corinth Canal), 1,369
 Venezia, Italy (south of Greece), 1,399

TARABULUS, LIBYA

(32°54'10" N., 13°11' 36" E.) to:

Junction Points*

Port Said, U.A.R., 998
 Strait of Gibraltar, 1,093

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Al Hammamat, Tunisia, 246
 Alexandria, U.A.R., 866
 Alger, Algeria, 665
 Alicante, Spain, 832
 Ancona, Italy, 820
 Annaba, Algeria, 440
 Banghazi, Libya, 354
 Barcelona, Spain, 762
 Bari, Italy, 613
 Batumi, U.S.S.R., 1,540
 Bayrut, Lebanon, 1,129
 Bizerte, Libya, 335
 Brindisi, Italy, 555
 Cartagena, Spain, 856
 Ceuta, Morocco, 1,074
 Genova, Italy, 719
 Gibraltar, 1,076
 Haifa, Israel, 1,109
 Iraklion, Crete, 630
 Iskenderun, Turkey, 1,167
 Istanbul, Turkey, 453
 Izmir, Turkey, 799
 La Spezia, Italy, 790
 Larnaca, Cyprus, 1,050
 Livorno, Italy, 754
 Malaga, Spain, 1,024
 Marsaxlokk, Malta, 191
 Marseille, France, 745
 Mersin, Turkey, 1,109
 Messina, Sicily, 344
 Napoli, Italy, 516
 Odessa, U.S.S.R., 1,301
 Oran, Algeria, 862
 Palermo, Sicily, 460
 Palma, Balearic Islands, 708
 Piraievs, Greece, 640
 Porto Empedocle, Sicily, 263
 Qabis, Tunisia, 174
 Rijeka, Yugoslavia, 887
 Rodhos, Rodhos, 780
 Savona, Italy, 722
 Sibenik, Yugoslavia, 761
 Siracusa, Sicily, 276
 Sousse, Tunisia, 231
 Split, Yugoslavia, 746
 Taranto, Italy, 509
 Thessaloniki, Greece, 848
 Toulon, France, 722
 Trieste, Free Territory, 921
 Tubruq, Libya, 574
 Tunis, Tunisia, 322
 Valencia, Spain, 831
 Valletta, Malta, 201
 Venezia, Italy, 931
 Volos, Greece, 789

TARAKAN, INDONESIA

(3°17'00" N., 117°35'00" E.) to:

Junction Points*

Lombok Strait, Indonesia, 830

Singapore, 1,286
 Sunda Strait, Indonesia, 1,191

Ports

Manila, Philippines, 785
 Tjilatjap, Indonesia, 1,217

TARANTO, ITALY

(40°28'46" N., 17°14'53" E.) to:

Junction Points*

Port Said, U.A.R. (via Corinth Canal), 951
 Port Said, U.A.R. (south of Greece), 954
 Strait of Gibraltar, 1,268

Ports

Alexandria, U.A.R., 844
 Alger, Algeria, 841
 Alicante, Spain, 995
 Ancona, Italy, 415
 Annaba, Algeria, 620
 Augusta, Sicily, 243
 Banghazi, Libya, 523
 Barcelona, Spain, 900
 Bari, Italy, 208
 Barletta, Italy, 232
 Bayrut, Lebanon (via Corinth Canal), 1,000
 Bayrut, Lebanon (south of Greece), 1,023
 Bizerte, Tunisia, 530
 Brindisi, Italy, 150
 Cartagena, Spain, 1,025
 Ceuta, Morocco, 1,249
 Cortone, Italy, 87
 Durres, Albania, 183
 Genova, Italy, 705
 Gibraltar, 1,250
 Haifa, Israel (via Corinth Canal), 1,003
 Haifa, Israel (south of Greece), 1,020
 Iraklion, Crete, 509
 Istanbul, Turkey (via Corinth Canal), 717
 Istanbul, Turkey (south of Greece), 806
 Izmir, Turkey (via Corinth Canal), 563
 Izmir, Turkey (south of Greece), 652
 Kalamai, Greece, 351
 Kerkira, Greece, 167
 La Spezia, Italy, 669
 Livorno, Italy, 634
 Malaga, Spain, 1,198
 Marseille, France, 797
 Messina, Sicily, 223
 Napoli, Italy, 395
 Odessa, U.S.S.R. (via Corinth Canal), 1,065

Odessa, U.S.S.R. (south of Greece), 1,154
 Oran, Algeria, 1,037
 Palermo, Sicily, 339
 Palma, Balearic Islands, 858
 Piraievs, Greece (via Corinth Canal), 363
 Piraievs, Greece (south of Greece), 493
 Porto di Milazzo, Sicily, 316
 Rijeka, Yugoslavia, 482
 Sarande, Albania, 154
 Savona, Italy, 715
 Sibenik, Yugoslavia, 356
 Siracusa, Sicily, 245
 Split, Yugoslavia, 341
 Taormina, Sicily, 211
 Tarabulus, Libya, 509
 Thessaloniki, Greece (via Corinth Canal), 612
 Thessaloniki, Greece (south of Greece), 701
 Toulon, France, 765
 Trieste, Free Territory, 516
 Tunis, Tunisia, 518
 Valencia, Spain, 983
 Valletta, Malta, 322
 Venezia, Italy, 526
 Villa San Giovanni, Italy, 287
 Vlores, Albania, 146
 Volos, Greece (via Corinth Canal), 553
 Volos, Greece (south of Greece), 642

TARRAGONA, SPAIN

(41°06'25" N., 1°14'30" E.) to:

Junction Points*

Port Said, U.A.R., 1,634
 Strait of Gibraltar, 501

Ports

Bayrut, Lebanon, 1,738
 Malaga, Spain, 431
 Oran, Algeria, 336
 Palma, Balearic Islands, 134
 Siracusa, Sicily, 746
 Toulon, France, 251
 Valencia, Spain, 124

TASA-DO, KOREA

(39°47'30" N., 124°25'00" E.) to:

Ports

Ching-tao, China, 339
 Inchon, Korea, 266
 Shang-hai, China, 597
 Shimonoseki, Japan, 639
 Ta-lien, China, 149

*JUNCTION POINT.—See Preface for use of junction points.

TELA, HONDURAS
(15°46'30" N., 87°27'00" W.) to:

Junction Points*
Panama, Panama, 749

Ports
Colon, Panama, 706
New Orleans, Louisiana, U.S.A., 915
San Juan, Puerto Rico, 1,258
Tampico, Mexico, 974

TEL AVIV, ISRAEL. See Jaffa.

TELUKBAJUR, INDONESIA. See Padang.

TELUK KAU, HALMAHERA
(1°16'00" N., 128°00'00" E.) to:

Junction Points*
Singapore (south of Celebes and Borneo), 1,997
Torres Strait, Australia, 1,204

Ports
Apra, Guam, 1,231
Darwin, Australia, 995
Hong Kong, B.C.C., 1,581
Honolulu, Hawaii, U.S.A., 4,490
Manila, Philippines, 1,049
Pago Pago, American Samoa, 3,819
Sai Gon, Vietnam, 1,520
Shang-hai, China, 1,914
Surabaya, Indonesia, 1,604
Suva, Fiji Islands, 3,251
Yokohama, Japan, 2,163

TEMA, GHANA
(5°37'33" N., 0°00'45" E.) to:

Junction Points*
Cape of Good Hope, Republic of South Africa, 2,619
Ushant, France, 3,597

Ports
Lagos, Nigeria, 216
Takoradi, Ghana, 117

TERNEUZEN, NETHERLANDS
(51°20'00" N., 3°49'00" E.)

Subtract 36 miles from Antwerpen distances.

TERRACINA, ITALY
(41°17'00" N., 13°16'00" E.) to:

Junction Points*
Port Said, U.A.R., 1,162
Strait of Gibraltar, 974

Ports
Livorno, Italy, 212
Napoli, Italy, 65
Palermo, Sicily, 191

TEXAS CITY, TEXAS, U.S.A.
(29°22'30" N., 94°53'15" W.)

Add 5 miles to Galveston distances.

THAMES HAVEN, ENGLAND
(51°30'00" N., 0°30'30" E.)

Subtract 23 miles from London distances.

THE SKAW, DENMARK. See Skagens Odde.

THESSALONIKI, GREECE
(40°37'56" N., 22°55'48" E.) to:

Junction Points*
Port Said, U.A.R., 741
Strait of Gibraltar (via Corinth Canal), 1,699
Strait of Gibraltar (via south of Greece), 1,716

Ports
Alexandria, U.A.R., 678
Alexandroupolis, Greece, 191
Alger, Algeria (via Corinth Canal), 1,270
Alger, Algeria (south of Greece), 1,287
Alicante, Spain (via Corinth Canal), 1,435
Alicante, Spain (south of Greece), 1,454
Ancona, Italy (via Corinth Canal), 857
Ancona, Italy (south of Greece), 953
Annaba, Algeria (via Corinth Canal), 1,046
Annaba, Algeria (south of Greece), 1,063
Banghazi, Libya, 611
Baniyas, Syria, 792
Barcelona, Spain (via Corinth Canal), 1,339

Barcelona, Spain (south of Greece), 1,380
Bari, Italy (via Corinth Canal), 650
Bari, Italy (south of Greece), 746
Batumi, U.S.S.R., 926
Bayrut, Lebanon, 783
Bizerte, Tunisia (via Corinth Canal), 941
Bizerte, Tunisia (south of Greece), 958
Brindisi, Italy (via Corinth Canal), 592
Brindisi, Italy (south of Greece), 688
Cartagena, Spain (via Corinth Canal), 1,462
Cartagena, Spain (south of Greece), 1,479
Ceuta, Morocco (via Corinth Canal), 1,679
Ceuta, Morocco (south of Greece), 1,696
Derince, Turkey, 372
Dikili, Turkey, 236
Ermoupolis, Greece, 227
Genova, Italy (via Corinth Canal), 1,144
Genova, Italy (south of Greece), 1,186
Gibraltar (via Corinth Canal), 1,682
Gibraltar (south of Greece), 1,698
Haifa, Israel, 786
Iraklion, Crete, 351
Iskenderun, Turkey, 784
Istanbul, Turkey, 338
Izmir, Turkey, 259
Kavala, Greece, 160
La Spezia, Italy (via Corinth Canal), 1,109
La Spezia, Italy (south of Greece), 1,150
Larnaca, Cyprus, 703
Livorno, Italy (via Corinth Canal), 1,073
Livorno, Italy (south of Greece), 1,114
Malaga, Spain (via Corinth Canal), 1,629
Malaga, Spain (south of Greece), 1,646
Marseille, France (via Corinth Canal), 1,236
Marseille, France (south of Greece), 1,278
Mersin, Turkey, 726
Messina, Sicily (via Corinth Canal), 663
Messina, Sicily (south of Greece), 704
Mitilini, Greece, 232
Napoli, Italy (via Corinth Canal), 834
Napoli, Italy (south of Greece), 876

*JUNCTION POINT.—See Preface for use of junction points.

Novorossiysk, U.S.S.R., 794
 Odessa, U.S.S.R., 686
 Oran, Algeria (via Corinth Canal), 1,467
 Oran, Algeria (south of Greece), 1,484
 Palermo, Sicily (via Corinth Canal), 779
 Palermo, Sicily (south of Greece), 820
 Palma, Balearic Islands (via Corinth Canal), 1,297
 Palma, Balearic Islands (south of Greece), 1,339
 Piraeus, Greece, 259
 Rijeka, Yugoslavia (via Corinth Canal), 924
 Rijeka, Yugoslavia (south of Greece), 1,023
 Rodhos, Rodhos, 388
 Savona, Italy (via Corinth Canal), 1,154
 Savona, Italy (south of Greece), 1,196
 Sibenik, Yugoslavia (via Corinth Canal), 796
 Sibenik Yugoslavia (south of Greece), 895
 Siracusa, Sicily (via Corinth Canal), 667
 Siracusa, Sicily (south of Greece), 692
 Split, Yugoslavia (via Corinth Canal), 781
 Split, Yugoslavia (south of Greece), 880
 Tarabulus, Libya, 848
 Taranto, Italy (via Corinth Canal), 612
 Taranto, Italy (south of Greece), 701
 Toulon, France (via Corinth Canal), 1,204
 Toulon, France (south of Greece), 1,246
 Trieste, Free Territory (via Corinth Canal), 957
 Trieste, Free Territory (south of Greece), 1,056
 Tunis, Tunisia (via Corinth Canal), 928
 Tunis, Tunisia (south of Greece), 945
 Valencia, Spain (via Corinth Canal), 1,422
 Valencia, Spain (south of Greece), 1,452
 Valletta, Malta, 732
 Venezia, Italy (via Corinth Canal), 968
 Venezia, Italy (south of Greece), 1,064
 Volos, Greece, 132

THORSHAVN, FAEROE ISLANDS.
 See Torshavn.

THULE, GREENLAND
 (76°32'52" N., 68°52'30" W.) to:

Junction Points*
 Pentland Firth, Scotland, 2,456
 Strait of Gibraltar, 3,299

Ports
 Churchill, Canada, 1,909
 Reykjavik, Iceland, 1,898
 St. John's, Canada, 1,800

TIENTSIN, CHINA
 (39°07'30" N., 117°11'45" E.) to:

Ports
 Moji, Japan, 840
 Shang-hai, China (via Chang-shan Shui-tao), 740
 Ta-ku, China, 48
 Yokohama, Japan (via Naikai), 1,465

TIENTSIN, CHINA. See Tien-ching.

TIKSI, U.S.S.R.
 (71°39'30" N., 128°59'00" E.) to:

Ports
 Ambarchik, U.S.S.R., 745
 Mys Chelyuskin, U.S.S.R., 579
 Pevek, U.S.S.R., 854
 Provideniya, U.S.S.R., 1,500

TINIAN, MARIANA ISLANDS
 (14°57'55" N., 145°37'20" E.) to:

Ports
 Apra, Guam, 127
 Honolulu, Hawaii, U.S.A., 3,230
 Jaluit, Marshall Islands, 1,536
 Sydney, Australia, 3,064
 Truk, Caroline Islands, 597

TJILATJAP, INDONESIA
 (7°44'00" S., 108°59'24" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 1,616
 Lombok Strait, Indonesia, 413
 Sunda Strait, Indonesia, 345

Ports
 Darwin, Australia, 1,321
 Fremantle, Australia, 1,519
 Padang, Indonesia, 738
 Tarakan, Indonesia, 1,217

TJIREBON, INDONESIA
 (6°42'00" S., 108°36'00" E.) to:

Junction Points*
 Lombok Strait, Indonesia, 503
 Singapore, 624
 Sunda Strait, Indonesia, 211

Ports
 Djakarta, Indonesia, 156
 Makasar, Celebes, 681

TOBRUCH, LIBYA. See Tubruq.

TOCOPILLA, CHILE
 (22°05'20" S., 70°14'00" W.) to:

Junction Points*
 Panama, Panama, 2,068
 Punta Arenas, Chile, 2,177

Ports
 San Antonio, Chile, 692
 San Francisco, California, U.S.A., 4,699
 Valparaiso, Chile, 663

TOEI, KOREA. See Tongyong.

TOKUYAMA, JAPAN
 (34°00'00" N., 131°46'00" E.) to:

Ports
 Apra, Guam, 1,427
 Kagoshima, Japan, 263
 Kure, Japan, 76
 Shimonoseki, Japan, 50
 Yokohama, Japan, 510

TOKYO, JAPAN
 (35°38'00" N., 139°46'00" E.)

Add 10 miles to Yokohama distances.

TOMARI, JAPAN
 (43°42'00" N., 145°30'00" E.) to:

Ports
 Aleksandrovsk, U.S.S.R., 542
 Aomori, Japan, 335
 Attu Island, Alaska, U.S.A., 1,238
 Dutch Harbor, Alaska, U.S.A., 1,978
 Hakodate, Japan, 301
 Kholmsk, U.S.S.R., 314
 Kiska, Alaska, U.S.A., 1,406
 Korsakov, U.S.S.R., 239

*JUNCTION POINT.—See Preface for use of junction points.

Muroran, Japan, 295
 Nemuro, Japan, 22
 Nikolayevsk, U.S.S.R., 694
 Otaru, Japan, 387
 Petropavlovsk, U.S.S.R., 822
 Vladivostok, U.S.S.R., 724
 Wakkanai, Japan, 246
 Zaliv Chikhacheva, U.S.S.R., 578

TOMIL HARBOR, CAROLINE ISLANDS. See Yap.

TOMPKINSVILLE, NEW YORK, U.S.A.
 (40°38'00" N., 74°04'00" W.)

For ocean distances, subtract 4½ miles from New York distances.

TONGATABU, TONGA ISLANDS.
 See Nukualofa.

TONGYONG, KOREA
 (34°50'00" N., 128°27'00" E.) to:

Ports
 Chinnampo, Korea, 446
 Mokpo, Korea, 189
 Najin, Korea, 501
 Pusan, Korea, 63
 Wonsan, Korea, 358

TONSBERG, NORWAY
 (59°15'42" N., 10°24'50" E.) to:

Junction Points*
 Pentland Firth, Scotland, 532

Ports
 Bergen, Norway, 329
 London, England, 624

TORNIO, FINLAND
 (65°45'30" N., 24°08'30" E.) to:

Junction Points*
 Skagens Odde, Denmark (via Store Baelt), 1,103
 Skagens Odde, Denmark (via The Sound), 973

TORRES STRAIT, AUSTRALIA*
 (10°33'00" S., 142°08'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 6,934
 Panama, Panama, 8,451

Port Said, U.A.R. (via Eight Degree Channel, October–April), 7,403
 Port Said, U.A.R. (via One and Half Degree Channel, May–September), 7,505
 Punta Arenas, Chile (via Raine Island entrance and Lat. 49° S.), 7,217
 Wetar Passage, Indonesia, 881
 Wilson Promontory, Australia (via Cape Capricorn and inner route), 2,183

Ports
 Aden, Aden Protectorate (via Eight Degree Channel, October–April), 6,016
 Aden, Aden Protectorate (via One and Half Degree Channel, May–September), 6,118
 Ambon, Indonesia, 964
 Apia, Samoa (via Raine Island entrance), 2,763
 Auckland, New Zealand (via Raine Island entrance), 2,485
 Bandjermasin, Borneo, 1,785
 Belawan, Indonesia, 2,839
 Bluff Harbor, New Zealand (via Raine Island entrance), 2,797
 Bombay, India (south of Java and Timor), 4,849
 Bowen, Australia, 760
 Brisbane, Australia (via Cape Capricorn and inner route), 1,348
 Burketown, Australia, 432
 Cairns Harbor, Australia, 505
 Callao, Peru (via Raine Island entrance), 8,152
 Catherine Hill Bay, Australia, 1,738
 Colombo, Ceylon (south of Java and Timor), 3,978
 Darwin, Australia (via Clarence Strait and Dundas Strait), 735
 Davao, Philippines, 1,628
 Djakarta, Indonesia (via Wetar Passage and north of Madura), 2,175
 Dunedin, New Zealand, 2,872
 Fremantle, Australia, 2,531
 Gladstone Harbor, Australia, 1,085
 Guayaquil, Ecuador (via Raine Island entrance), 8,270
 Hai-kou, Hai-nan Tao, China, 2,801
 Hobart, Tasmania, 2,271
 Hong Kong, B.C.C., 2,725
 Honolulu, Hawaii, U.S.A. (via Raine Island entrance, China Strait and Bougainville Strait), 4,191
 Hsia-men, China, 2,655
 Jesselton, North Borneo, 2,041
 Karachi, Pakistan (south of Java and Timor), 5,298
 Klama Harbor, Australia, 1,760
 Kuang-chou, China, 2,803

Launceston, Tasmania, 2,278
 Lautoka Harbor, Fiji Islands, 2,204
 Levuka, Fiji Islands (via Raine Island entrance), 2,268
 Lucinda, Australia, 634
 Lyttelton, New Zealand, 2,849
 Mackay, Australia, 864
 Malacca, Malaysia, 2,588
 Manila, Philippines (via Basilan Strait and Mindoro Strait), 2,193
 Massaua, Ethiopia (via Eight Degree Channel, October–April), 6,403
 Massaua, Ethiopia (via One and Half Degree Channel, May–September), 6,506
 Nelson, New Zealand, 2,646
 Noumea, New Caledonia (via Raine Island entrance), 1,622
 Pago Pago, American Samoa (via Raine Island entrance), 2,848
 Palmyra Island (via Raine Island entrance), 3,593
 Papeete, Society Islands (via Raine Island entrance), 4,043
 Port Kembla, Australia, 1,817
 Port Lincoln, Australia, 2,811
 Port Louis, Mauritius, 4,933
 Portland, Australia, 2,429
 Pulupandan, Philippines, 1,962
 Rockhampton, Australia, 1,034
 Sabang, Indonesia, 3,072
 Sai Gon, Vietnam, 2,629
 San Francisco, California, U.S.A. (via Raine Island entrance), 6,249
 Sorido, Indonesia, 1,329
 Sorong, New Guinea, 1,021
 Surabaya, Indonesia (via Wetar Passage and south of Madura), 1,784
 Surabaya, Indonesia via Wetar Passage and north of Madura), 1,814
 Suva, Fiji Islands (via Raine Island entrance, north of Cape Cumberland and Maewo to Kandavu Passage), 2,212
 Sydney, Australia, 1,754
 Teluk Kau, Halmahera, 1,204
 Townsville, Australia, 662
 Urangan, Australia, 1,198
 Valparaiso, Chile (via Lat. 49° S.), 7,670
 Victoria, North Borneo, 2,192
 Wellington, New Zealand (via Raine Island entrance), 2,652

TORSHAVN, FAEROE ISLANDS
 (62°00'20" N., 6°45'30" W.) to:

Junction Points*
 Pentland Firth, Scotland, 224
 Skagens Odde, Denmark, 624

*JUNCTION POINT.—See Preface for use of junction points.

Ports

Aberdeen, Scotland, 365
Bergen, Norway, 372
Reykjavik, Iceland, 516

TOSHIMOYE, JAPAN. See Kasatka.

TOULON, FRANCE

(43°06'45" N., 5°55'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,486
Strait of Gibraltar, 722

Ports

Ajaccio, Corsica, 155
Alexandria, U.A.R., 1,376
Alger, Algeria, 406
Alicante, Spain, 418
Ancona, Italy, 1,077
Annaba, Algeria, 390
Banghazi, Libya, 972
Barcelona, Spain, 205
Bari, Italy, 870
Bayrut, Lebanon, 1,568
Bizerte, Tunisia, 405
Brindisi, Italy, 812
Cagliari, Sardinia, 337
Cartagena, Spain, 471
Castellamare di Stabia, Italy, 430
Ceuta, Morocco, 704
Genova, Italy, 171
Gibraltar, 705
Haifa, Israel, 1,565
Iraklion, Crete, 1,051
Istanbul, Turkey (via Corinth Canal), 1,310
Istanbul, Turkey (south of Greece), 1,351
Izmir, Turkey (via Corinth Canal), 1,155
Izmir, Turkey (south of Greece), 1,197
La Spezia, Italy, 199
Livorno, Italy, 204
Malaga, Spain, 652
Messina, Sicily, 546
Napoli, Italy, 424
Odessa, U.S.S.R. (via Corinth Canal), 1,658
Odessa, U.S.S.R. (south of Greece), 1,699
Oran, Algeria, 545
Palermo, Sicily, 464
Palma, Balearic Islands, 308
Piraeus, Greece (via Corinth Canal), 956
Piraeus, Greece (south of Greece), 1,038
Rijeka, Yugoslavia, 1,145
Savona, Italy, 156

Sibenik, Yugoslavia, 1,018
Siracusa, Sicily, 617
Skikda, Algeria, 381
Split, Yugoslavia, 1,003
Tarabulus, Libya, 722
Taranto, Italy, 765
Tarragona, Spain, 251
Thessaloniki, Greece (via Corinth Canal), 1,204
Thassaloniki, Greece (south of Greece), 1,246
Trieste, Free Territory, 1,178
Tunis, Tunisia, 453
Valencia, Spain, 363
Valletta, Malta, 605
Venezia, Italy, 1,188
Volos, Greece (via Corinth Canal), 1,145
Volos, Greece (via south of Greece), 1,187

TOURANE, VIETNAM. See Da Nang.

TOWNSVILLE, AUSTRALIA

(19°15'00" S., 146°50'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 3,023
Torres Strait, Australia, 662
Wilson Promontory, Australia, 1,499

Ports

Brisbane, Australia, 677
Noumea, New Caledonia, 1,155
Port Moresby, Papua, 595

TOYAMA, JAPAN. See Higashi-Iwase.

TRABZON, TURKEY

(41°01'00" N., 39°46'30" E.)

Add 511 miles to Istanbul distances for ports outside the Black Sea.

TRALLEBORG, SWEDEN. See Trelleborg.

TRAPANI, SICILY

(38°00'15" N., 12°30'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,100
Strait of Gibraltar, 896

Ports

Messina, Sicily, 177
Napoli, Italy, 198
Tunis, Tunisia, 138

TRAVEMUNDE, GERMANY

(53°57'35" N., 10°53'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 88
Sakgens Odde, Denmark (via Store Baelt), 282

Ports

Gdynia, Poland, 307
Kobenhavn, Denmark (via Store Baelt), 234
Kobenhavn, Denmark (via The Sound), 139
Oslo, Norway (via Store Baelt), 389
Oslo, Norway (via The Sound), 410

TRELLEBORG, SWEDEN

(55°22'00" N., 13°09'25" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 141
Skagens Odde, Denmark (via Store Baelt), 333
Skagens Odde, Denmark (via The Sound), 192

Ports

Kristiansand, Norway, 425
Oslo, Norway (via Store Baelt), 467
Oslo, Norway (via The Sound), 314

TRENTON, NEW JERSEY, U.S.A.
(40°11'24" N., 74°45'24" W.)

Add 28 miles to Philadelphia distances.

TRIESTE, FREE TERRITORY

(45°39'13" N., 13°44'49" E.) to:

Junction Points*

Port Said, U.A.R. (via Corinth Canal), 1,297
Port Said, U.A.R. (south of Greece), 1,310
Strait of Gibraltar, 1,682

Ports

Al Ladhiqiyah, Syria (via Corinth Canal), 1,337
Al Ladhiqiyah, Syria (south of Greece), 1,370

*JUNCTION POINT.—See Preface for use of junction points.

Alexandria, U.A.R., 1,200
 Alger, Algeria, 1,254
 Alicante, Spain, 1,409
 Ancona, Italy, 130
 Annaba, Algeria, 1,034
 Banghazi, Libya, 901
 Barcelona, Spain, 1,313
 Bari, Italy, 321
 Batumi, U.S.S.R. (via Corinth Canal), 1,650
 Batumi, U.S.S.R. (south of Greece), 1,749
 Bayrut, Lebanon (via Corinth Canal), 1,346
 Bayrut, Lebanon (south of Greece), 1,379
 Bizerte, Tunisia, 943
 Brindisi, Italy, 376
 Cartagena, Spain, 1,439
 Ceuta, Morocco, 1,662
 Genova Italy, 1,118
 Gibraltar, 1,664
 Haifa, Israel (via Corinth Canal), 1,348
 Haifa, Israel (south of Greece), 1,375
 Iraklion, Crete, 865
 Istanbul, Turkey (via Corinth Canal), 1,063
 Istanbul, Turkey (south of Greece), 1,162
 Izmir, Turkey (via Corinth Canal), 908
 Izmir, Turkey (south of Greece), 1,007
 La Spezia, Italy, 1,083
 Livorno, Italy, 1,047
 Malaga, Spain, 1,611
 Marseille, France, 1,210
 Messina, Sicily, 637
 Napoli, Italy, 808
 Odessa, U.S.S.R. (via Corinth Canal), 1,411
 Odessa, U.S.S.R. (south of Greece), 1,510
 Oran, Algeria, 1,450
 Palermo, Sicily, 753
 Palma, Balearic Islands, 1,271
 Piraievs, Greece (via Corinth Canal), 709
 Piraievs, Greece (south of Greece), 848
 Rijeka, Yugoslavia, 120
 Savona, Italy, 1,128
 Sibenik, Yugoslavia, 192
 Siracusa, Sicily, 658
 Split, Yugoslavia, 210
 Tarabulus, Libya, 921
 Taranto, Italy, 516
 Thessaloniki, Greece (via Corinth Canal), 957
 Thessaloniki, Greece (south of Greece), 1,056

Toulon, France, 1,178
 Tunis, Tunisia, 930
 Valencia, Spain, 1,396
 Valletta, Malta, 735
 Volos, Greece (via Corinth Canal), 898
 Volos, Greece (south of Greece), 997
 Zadar, Yugoslavia, 142

TRINCOMALEE, CEYLON

(8°33'30" N., 81°12'45" E.) to:

Ports

Bombay, India, 1,218
 Colombo, Ceylon, 347
 Galle, Ceylon, 255
 Karachi, Pakistan, 1,667
 Padang, Indonesia, 1,301

TRIPOLI, LEBANON. See Tarabulus.

TRIPOLI, LIBYA. See Tarabulus.

TROMSO, NORWAY

(69°39'00" N., 18°58'30" E.) to:

Junction Points*

Bishop Rock, England (via English Channel), 1,597

Ports

Bjornoya, Svalbard, 306
 Bergen, Norway, 705
 Galway, Ireland, 1,352
 Hammerfest, Norway, 124
 Jan Mayen, 567
 Longyearbyen, Svalbard, 556
 Oslo, Norway, 1,069
 Stavanger, Norway, 810

TRONDHEIM, NORWAY

(63°26'00" N., 10°23'00" E.) to:

Junction Points*

Bishop Rock, England (via English Channel), 1,202

Ports

Bergen, Norway, 321
 Hull, England, 752
 Kristiansand, Norway, 436
 Longyearbyen, Svalbard, 943
 Oslo, Norway, 688
 Reykjavik, Iceland, 969

TRUK, CAROLINE ISLANDS

(7°22'00" N., 151°54'00" E.) to:

Junction Points*

Panama, Panama, 7,685
 Singapore, 3,052

Ports

Apra, Guam, 590
 Auckland, New Zealand, 3,000
 Bale du Controleur, Marquesas, 4,199
 Ching-tao, China, 2,459
 Darwin, Australia (via Selat Sele), 2,142
 Dutch Harbor, Alaska, U.S.A., 3,493
 Guayaquil, Ecuador, 7,752
 Hal-kou, Hal-nan Tao, China, 2,565
 Hong Kong, B.C.C., 2,376
 Honolulu, Hawaii, U.S.A., 3,028
 Jaluit, Marshall Islands, 1,078
 Kodiak, Alaska, U.S.A., 4,008
 Manila, Philippines, 1,994
 Midway Island, Pacific, 2,146
 Noumea, New Caledonia, 2,068
 Pago Pago, American Samoa, 2,603
 Palmyra Island, 2,747
 Papette, Society Islands, 3,788
 Ponape, Caroline Islands, 383
 Sai Gon, Vietnam, 2,799
 Saipan, Mariana Islands, 610
 San Diego, California, U.S.A., 5,216
 San Francisco, California, U.S.A., 4,931
 Seattle, Washington, U.S.A., 4,929
 Shang-hai, China, 2,261
 Sitka, Alaska, U.S.A., 4,473
 Surabaya, Indonesia, 2,623
 Suva, Fiji Islands, 2,231
 Sydney, Australia, 2,543
 Tinian, Mariana Islands, 597
 Valparaiso, Chile, 7,952
 Vladivostok, U.S.S.R., 2,593
 Wake Island, 1,117
 Yap, Caroline Islands, 851
 Yokohama, Japan, 1,832

TSAM KONG, CHINA. See Chan Chiang.

TSINGTAO, CHINA. See Ching-tao.

TSO-YING, TAIWAN

(22°42'00" N., 120°15'00" E.) to:

Ports

Hong Kong, B.C.C., 343
 Inchon, Korea, 975
 Makasar, Celebes, 1,757
 Manila, Philippines, 552
 Sai Gon, Vietnam, 1,131

*JUNCTION POINT.—See Preface for use of junction points.

TSUCHIZAKI, JAPAN. See Akita.

TSURUGA, JAPAN

(35°39'30" N., 136°04'00" E.) to:

Ports

Hakodate, Japan, 447
Masan, Korea, 385
Shang-hai, China, 823
Shimonoseki, Japan, 325
Vladisvostok, U.S.S.R., 490

TUBRUQ, LIBYA

(32°04'39" N., 23°59'00" E.) to:

Junction Points*

Port Said, U.A.R., 445
Strait of Gibraltar, 1,534

Ports

Alexandria, U.A.R., 308
Banghazi, Libya, 248
Bayrut, Lebanon, 595
Genova, Italy, 1,048
Iskenderun, Turkey, 667
Piraeus, Greece, 359
Tarabulus, Libya, 574
Venezia, Italy, 980

TULEAR, MALAGASY REPUBLIC

(23°21'42" S., 43°39'42" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 1,509
Port Said, U.A.R., 3,966

Ports

Beira, Mozambique, 539
Majunga, Malagasy Republic, 625
Manakara, Malagasy Republic, 467
Mocambique, Mozambique, 532

TUNG-HAI-TAN, CHINA. See

Chang-kan.

TUNIS, TUNISIA

(36°47'54" N., 10°11'51" E.) to:

Junction Points*

Port Said, U.A.R., 1,172
Strait of Gibraltar, 820

Ports

Al Khums, Libya, 357
Al Ladhiqiyah, Syria, 1,258
Alexandria, U.A.R., 1,051

Alger, Algeria, 392
Alicante, Spain, 558
Ancona, Italy, 830
Annaba, Algeria, 167
As Sukhayrah, Tunisia, 301
Banghazi, Libya, 585
Baniyas, Syria, 1,275
Barcelona, Spain, 492
Bari, Italy, 622
Bayrut, Lebanon, 1,263
Brindisi, Italy, 564
Cagliari, Sardinia, 169
Cartagena, Spain, 583
Ceuta, Morocco, 801
Gaeta, Italy, 315
Genova, Italy, 472
Gibraltar, 803
Haifa, Israel, 1,260
Iraklion, Crete, 745
Istanbul, Turkey (via Corinth Canal), 1,033
Istanbul, Turkey (south of Greece), 1,050
Izmir, Turkey (via Corinth Canal), 879
Izmir, Turkey (south of Greece), 896
Kalamai, Greece, 599
La Spezia, Italy, 448
Livorno, Italy, 417
Marsala, Sicily, 124
Marsaxlokk, Malta, 246
Marseille, France, 476
Messina, Sicily, 302
Napoli, Italy, 313
Odessa, U.S.S.R. (via Corinth Canal), 1,382
Odessa, U.S.S.R. (south of Greece), 1,399
Oran, Algeria, 589
Palermo, Sicily, 193
Palma, Balearic Islands, 435
Piraeus, Greece (via Corinth Canal), 680
Piraeus, Greece (south of Greece), 737
Porto di Licata, Sicily, 187
Porto Empedocle, Sicily, 167
Pozzuoli, Italy, 308
Qabis, Tunisia, 302
Rijeka, Yugoslavia, 897
Savona, Italy, 475
Sibenik, Yugoslavia, 771
Siracusa, Sicily, 283
Split, Yugoslavia, 756
Tarabulus, Libya, 322
Taranto, Italy, 518
Thessaloniki, Greece (via Corinth Canal), 928
Thessaloniki, Greece (south of Greece), 945
Toulon, France, 453
Trapani, Sicily, 138

Trieste, Free Territory, 930

Valencia, Spain, 560
Valletta, Malta, 234
Venezia, Italy, 940
Viareggio, Italy, 778
Volos, Greece (via Corinth Canal), 869
Volos, Greece (south of Greece), 886

TURIAMO, VENEZUELA

(10°26'30" N., 67°50'30" W.) to:

Junction Points*

Panama, Panama, 858
Yucatan Channel, 1,221

Ports

Barranquilla, Colombia, 504
Port of Spain, Trinidad, 384
Willemstad, Curacao, 124

TURKU, FINLAND

(60°26'00" N., 22°13'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 576
Skagens Odde, Denmark (via Store Baelt), 768
Skagens Odde, Denmark (via The Sound), 642

Ports

Oslo, Norway (via Store Baelt), 892
Oslo, Norway (via The Sound), 764
Rauma, Finland, 98

TUXPAM, MEXICO. See Tuxpan.

TUXPAN, MEXICO

(20°58'00" N., 97°25'00" W.) to:

Junction Points*

Panama, Panama, 1,498
Straits of Florida, 817
Yucatan Channel, 689

Ports

Alvaro Obregon, Mexico, 307
Apalachicola, Florida, U.S.A., 843
Belize, British Honduras, 897
Campeche, Mexico, 375
Carmen, Mexico, 333
Cartagena, Colombia, 1,545
Castries, St. Lucia, 2,136
Charlotte Amalie, Virgin Islands (via Yucatan Channel and Windward Passage), 1,867

*JUNCTION POINT.—See Preface for use of junction points.

Charlotte Amalie, Virgin Islands (via Yucatan Channel and south of Hispaniola), 1,884

Charlotte Amalie, Virgin Islands (via Old Bahama Channel), 1,890

Cienfuegos, Cuba, 979

Colon, Panama, 1,455

Galveston, Texas, U.S.A., 530

Gulfport, Mississippi, U.S.A., 751

Habana, Cuba, 847

Key West, Florida, U.S.A., 891

Kingston, Jamaica, 1,243

La Guaira, Venezuela, 1,923

Matagorda Bay, Texas, U.S.A., 445

Mobile, Alabama, U.S.A., 776

New Orleans, Louisiana, U.S.A., 739

Pensacola, Florida, U.S.A., 785

Pointe a Pitre, Guadeloupe, 2,094

Port Arthur, Texas, U.S.A., 572

Port au Prince, Haiti, 1,428

Port of Spain, Trinidad, 2,201

Puerto Cabello, Venezuela, 1,883

Santo Domingo, Dominican Republic, 1,624

Veracruz, Mexico, 134

Willemstad, Curacao, 1,786

TVEDESTRAND, NORWAY

(58°37'10" N., 8°56'20" E.) to:

Junction Points*

Pentland Firth, Scotland, 421

Skagens Odde, Denmark, 76

Ports

Bergen, Norway, 272

London, England, 565

Oslo, Norway, 121

TYRE, LEBANON. See Sur.

UBE, JAPAN

(33°55'00" N., 131°13'30" E.) to:

Ports

Hagata, Japan, 84

Kagoshima, Japan, 280

Nagoya, Japan, 419

Pusan, Korea, 143

Yokohama, Japan, 536

UGLEGORSK, U.S.S.R. See Esu-toru.

ULEABORG, FINLAND. See Oulu.

ULSAN, KOREA

(35°28'00" N., 129°24'00" E.) to:

Ports

Hakodate, Japan, 661

Inchon, Korea, 435

Maizuru, Japan, 315

Najin, Korea, 418

Vladivostok, U.S.S.R., 486

UMEA, SWEDEN

(63°49'12" N., 20°16'20" E.) to:

Junction Points*

Kiel Canal, Germany, 751

Skagens Odde, Denmark, 812

Ports

Gdynia, Poland, 574

Leningrad, U.S.S.R., 574

Stockholm, Sweden, 289

UMM SAID, QATAR

(24°53'30" N., 51°34'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 5,245

Cape of Good Hope, Republic of South Africa, 4,909

Port Said, U.A.R., 3,091

Singapore, 3,630

Ports

Al Basrah, Iraq, 444

UNALAKLEET, ALASKA, U.S.A.

(63°52'15" N., 160°47'15" W.) to:

Junction Points*

Panama, Panama, 5,967

Ports

Dutch Harbor, Alaska, U.S.A., 752

Honolulu, Hawaii, U.S.A., 2,407

Kodiak, Alaska, U.S.A., 884

San Diego, California, U.S.A., 2,791

Seattle, Washington, U.S.A., 2,023

UNGGI, KOREA

(42°19'00" N., 130°24'45" E.) to:

Ports

Hakodate, Japan, 486

Maizuru, Japan, 474

Otaru, Japan, 488

Pusan, Korea, 452

Shimonoseki, Japan, 511

UNO, JAPAN

(34°29'00" N., 133°57'30" E.) to:

Ports

Chi-lung Chiang, Taiwan, 903

Kobe, Japan, 71

Kure, Japan, 117

Shimonoseki, Japan, 177

Yokohama, Japan, 405

UPERNIVIK, GREENLAND

(72°46'30" N., 56°12'00" W.) to:

Junction Points*

Pentland Firth, Scotland, 2,164

Strait of Gibraltar, 3,011

Ports

Churchill, Canada, 1,669

Reykjavik, Iceland, 1,610

St. John's, Canada, 1,532

URANGAN, AUSTRALIA

(25°17'00" S., 152°55'00" E.) to:

Junction Points*

Torres Strait, Australia, 1,198

Wilson Promontory, Australia, 1,100

Ports

Brisbane, Australia, 282

Wellington, New Zealand, 1,581

URKT ROAD, SAKHALIN. See Reyd Urkt.

USHANT, FRANCE*

(48°40'00" N., 5°30'00" W.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 5,746

Kiel Canal (east end), Germany, 716

Punta Arenas, Chile, 6,986

Skagens Odde, Denmark, 833

Strait of Gibraltar, 918

Ports

Aberdeen, Scotland, 715

Agadir, Morocco, 1,136

Amboim, Angola, 4,739

Amsterdam, Netherlands, 465

Anecho, Togo, 3,704

Antwerpen, Belgium, 441

Aviles, Spain, 307

Bata, Spanish Guiana, 4,173

Bayonne, France, 345

Belem, Brazil, 3,743

*JUNCTION POINT.—See Preface for use of junction points.

Bergen, Norway, 894
 Bilbao, Spain, 346
 Bissau, Portuguese Guinea, 2,401
 Bolama, Portuguese Guiana, 2,422
 Bordeaux, France, 321
 Bremerhaven, Germany, 647
 Brest, France, 55
 Buenos Aires, Argentina, 5,916
 Cadiz, Spain, 894
 Caen, France, 240
 Calabar, Nigeria, 4,054
 Calais, France, 321
 Cape Town, Republic of South Africa, 5,743
 Casablanca, Morocco, 960
 Cotonou, Dahomey, 3,747
 Dakar, Senegal, 2,152
 Dartmouth, England, 135
 Dieppe, France, 270
 Dover, England, 306
 Dundee, Scotland, 698
 Dunkerque, France, 351
 Egersund, Norway, 783
 El Ferrol del Caudillo, Spain, 343
 El Jadida, Morocco, 998
 Emden, Germany, 590
 Esbjerg, Denmark, 676
 Falmouth, England, 100
 Fecamp, France, 246
 Fedala, Morocco, 944
 Freetown, Sierra Leone, 2,630
 Funchal, Madeira Island, 1,098
 Gijon, France, 294
 Granville, France, 158
 Greenville, Liberia, 2,981
 Hamburg, Germany, 703
 Hartlepool, England, 579
 Hull, England, 523
 Kenitra, Morocco, 954
 Kristiansand, Norway, 794
 La Coruna, Spain, 331
 La Pallice, France, 245
 Lagos, Nigeria, 3,746
 Larache, Morocco, 926
 Le Havre, France, 243
 Leith, Scotland, 696
 Lisboa, Portugal, 666
 Lobito, Angola, 4,670
 London, England, 398
 Longji, Cameroon, 4,179
 Lorient, France, 107
 Marin, Ponte Vedra Bay, Spain, 437
 Mayumba, Gabon, 4,437
 Mocamedes, Angola, 4,697
 Montevideo, Uruguay, 5,802
 Narvik, Norway, 1,498
 Natal, Brazil, 3,619
 Newcastle, England, 604
 Oostende, Belgium, 365
 Oslo, Norway, 944
 Paramaribo, Surinam, 3,613
 Plymouth, England, 117

Ponta Delgada, Azores, 1,101
 Port Buchanan, Liberia, 2,904
 Port Etienne, Mauritania, 1,826
 Port Harcourt, Nigeria, 3,974
 Port Nolloth, Republic of South Africa, 5,516
 Porto, Portugal, 494
 Porto Grande, Cape Verde Islands, 2,137
 Portsmouth, England, 227
 Puerto de Pasajes, Spain, 340
 Quiberon, France, 133
 Rabat, Morocco, 954
 Recife, Brazil, 3,743
 Rio de Janeiro, Brazil, 4,815
 River Cess, Liberia, 2,940
 Rota, Spain, 885
 Rotterdam, Netherlands, 444
 Safi, Morocco, 1,023
 St. Helena Island, 4,120
 St. Louis, Senegal, 2,075
 St. Malo, France, 141
 St. Nazaire, France, 184
 Salvador, Brazil, 4,134
 San Sebastian, Spain, 353
 Santa Cruz de Tenerife, Canary Islands, 1,320
 Santander, Spain, 323
 Santos, Brazil, 5,002
 Sekondi, Ghana, 3,424
 Setubal, Portugal, 672
 Shoreham By Sea, England, 245
 Sidi Ifni, Ifni, 1,196
 Southampton, England, 223
 Stavanger, Norway, 823
 Sulima, Sierra Leone, 2,739
 Swakopmund, Republic of South Africa, 5,156
 Tabu, Ivory Coast, 3,097
 Tema, Ghana, 3,597
 Viana do Castelo, Portugal, 467
 Victoria, Cameroon, 4,126
 Vigo, Spain, 439
 Vila Rial de Santo Antonio, Portugal, 836
 Villagarcia, Spain, 433
 Wilhelmsaven, Germany, 639
 Willemstad, Curacao, 3,821
 Zeebrugge, Belgium, 380

USHUAIA, ARGENTINA
 (54°59'00" S., 68°18'10" W.) to:

Ports
 Buenos Aires, Argentina, 1,447
 Stanley, Falkland Islands, 468

USKUDAR, TURKEY
 (41°01'15" N., 29°00'00" E.)

Use Istanbul distances.

UUSIKAUPUNKI, FINLAND
 (60°47'30" N., 21°22'30" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 624
 Skagens Odde, Denmark (via Store Baelt), 825

Ports
 Helsinki, Finland, 293
 Oslo, Norway (via Store Baelt), 939
 Oslo, Norway (via The Sound), 808
 Stockholm, Sweden, 164

VAASA, FINLAND
 (63°05'15" N., 21°33'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 744
 Skagens Odde, Denmark, 805

Ports
 Jakobstad, Finland, 99
 Rauma, Finland, 160
 Stockholm, Sweden, 282

VADO LIGURE, ITALY
 (44°16'00" N., 8°27'00" E.)

Use Savona distances.

VADSO, NORWAY
 (70°04'30" N., 29°44'00" E.) to:

Ports
 Bjornoya, Svalbard, 373

VALDEZ, ALASKA, U.S.A.
 (61°06'00" N., 146°17'00" W.) to:

Ports
 Petersburg, Alaska, U.S.A., 539
 Seattle, Washington, U.S.A., 1,229
 Seward, Alaska, U.S.A., 145
 Sitka, Alaska, U.S.A., 473
 Yakutat, Alaska, U.S.A., 287

VALDIVIA, CHILE
 (39°49'00" S., 73°17'20" W.)

And 11 miles to Corral distances.

VALENCIA, SPAIN
 (39°27'14" N., 0°19'12" W.) to:

Junction Points*
 Port Said, U.A.R., 1,679
 Strait of Gibraltar, 403

*JUNCTION POINT.—See Preface for use of junction points.

Ports
 Al Ladhigiyah, Syria, 1,765
 Alexandria, U.A.R., 1,559
 Alger, Algeria, 230
 Alicante, Spain, 98
 Ancona, Italy, 1,295
 Annaba, Algeria, 426
 Augusta, Sicily, 801
 Banghazi, Libya, 1,094
 Barcelona, Spain, 165
 Bari, Italy, 1,088
 Bayrut, Lebanon, 1,770
 Bizerte, Tunisia, 506
 Brindisi, Italy, 1,048
 Cagliari, Sardinia, 461
 Cartagena, Spain, 152
 Ceuta, Morocco, 385
 Genova, Italy, 512
 Gibraltar, 386
 Haifa, Israel, 1,767
 Iraklion, Crete, 1,252
 Istanbul, Turkey (via Corinth Canal), 1,528
 Istanbul, Turkey (south of Greece), 1,558
 Izmir, Turkey (via Corinth Canal), 1,374
 Izmir, Turkey (south of Greece), 1,403
 La Spezia, Italy, 538
 Livorno, Italy, 539
 Malaga, Spain, 334
 Marseille, France, 347
 Messina, Sicily, 764
 Napoli, Italy, 690
 Odessa, U.S.S.R. (via Corinth Canal), 1,876
 Odessa, U.S.S.R. (south of Greece), 1,906
 Oran, Algeria, 238
 Palermo, Sicily, 656
 Palma, Balearic Islands, 146
 Piraeus, Greece (via Corinth Canal), 1,174
 Piraeus, Greece (south of Greece), 1,244
 Rijeka, Yugoslavia, 1,363
 Savona, Italy, 497
 Sibenik, Yugoslavia, 1,237
 Siracusa, Sicily, 790
 Split, Yugoslavia, 1,222
 Tarabulus, Libya, 831
 Taranto, Italy, 983
 Tarragona, Spain, 124
 Thessaloniki, Greece (via Corinth Canal), 1,422
 Thessaloniki, Greece (south of Greece), 1,452
 Toulon, France, 363
 Trieste, Free Territory, 1,396
 Tunis, Tunisia, 560
 Valletta, Malta, 743

Venezia, Italy, 1,406
 Volos, Greece (via Corinth Canal), 1,364
 Volos, Greece (south of Greece), 1,393

VALLETTA, MALTA
 (35°53'30" N., 14°30'52" E.) to:

Junction Points*
 Port Said, U.A.R., 946
 Strait of Gibraltar, 1,005

Ports
 Al Hammamat, Tunisia, 198
 Alexandria, U.A.R., 823
 Alger, Algeria, 576
 Alicante, Spain, 743
 Ancona, Italy, 634
 Annaba, Algeria, 352
 Augusta, Sicily, 98
 Banghazi, Libya, 359
 Barcelona, Spain, 671
 Bari, Italy, 427
 Bayrut, Lebanon, 1,049
 Bizerte, Tunisia, 247
 Brindisi, Italy, 369
 Cagliari, Sardinia, 331
 Cartagena, Spain, 768
 Ceuta, Morocco, 986
 Civitavecchia, Italy, 421
 Darnah, Libya, 450
 Genova, Italy, 584
 Gibraltar, 988
 Haifa, Israel, 1,038
 Iraklion, Crete, 528
 Istanbul, Turkey, 837
 Izmir, Turkey, 683
 Jaffa, Israel, 1,037
 La Spezia, Italy, 554
 Livorno, Italy, 519
 Malaga, Spain, 928
 Marsala, Sicily, 157
 Marseille, France, 637
 Messina, Sicily, 156
 Napoli, Italy, 327
 Nice, France, 592
 Odessa, U.S.S.R., 1,185
 Oran, U.S.S.R., 774
 Palermo, Sicily, 242
 Palma, Balearic Islands, 619
 Piraeus, Greece, 524
 Porto di Licata, Sicily, 78
 Porto Empedocle, Sicily, 97
 Qabis, Tunisia, 232
 Rijeka, Yugoslavia, 701
 Savona, Italy, 588
 Sete, France, 694
 Sibenik, Yugoslavia, 575
 Siracusa, Sicily, 88
 Sousse, France, 197
 Split, Yugoslavia, 560

Tarabulus, Libya, 201
 Taranto, Italy, 322
 Thessaloniki, Greece, 732
 Toulon, France, 605
 Trieste, Free Territory, 735
 Tunis, Tunisia, 234
 Valencia, Spain, 743
 Venezia, Italy, 745
 Volos, Greece, 672

VALONA, ALBANIA. See Vlores.

VALPARAISO, CHILE
 (33°02'00" S., 71°38'00" W.) to:

Junction Points*
 Panama, Panama, 2,616
 Punta Arenas, Chile, 1,432
 Torres Strait, Australia (via Raine Island entrance and Lat. 30° S.), 8,015
 Wilson Promontory, Australia (via Lat. 60° S.), 6,031

Ports
 Acapulco, Mexico, 3,406
 Antofagasta, Chile, 576
 Apia, Samoa, 5,453
 Apra, Guam, 8,510
 Arica, Chile, 882
 Auckland, New Zealand, 5,247
 Avarua, Cook Islands, 4,632
 Baie du Controleur, Marquesas, 4,029
 Caldera, Chile, 376
 Callao, Peru, 1,306
 Chanaral, Chile, 417
 Chimbote, Peru, 1,490
 Ching-tao, China, 10,274
 Coquimbo, Chile, 203
 Corinto, Nicaragua, 2,875
 Corral, Chile, 442
 Dutch Harbor, Alaska, U.S.A., 7,140
 Esmeraldas, Ecuador, 2,179
 Guayaquil, Ecuador, 1,980
 Guaymas, Mexico, 4,291
 Hai-Kou, Hai-nan Tao, 10,365
 Hakodate, Japan, 9,197
 Hong Kong, B.C.C. (direct), 10,218
 Honolulu, Hawaii, U.S.A., 5,919
 Hsia-men, China (via Cook Strait), 10,216
 Iquique, Chile, 782
 Islas Juan Fernandez, 364
 Jaluit, Marshall Islands, 7,034
 Kobe, Japan, 9,534
 Kodiak, Alaska, U.S.A., 6,803
 Levuka, Fiji Islands, 5,753
 Los Angeles, California, U.S.A., 4,808
 Lota, Chile, 268
 Manila, Philippines (direct), 9,710

*JUNCTION POINT.—See Preface for use of junction points.

Midway Island, Pacific, 7,042
 Mollendo, Peru, 962
 Monterey, California, U.S.A., 5,060
 Montevideo, Uruguay, 2,740
 Nagasaki, Japan, 9,806
 Nome, Alaska, U.S.A., 7,728
 Noumea, New Caledonia, 6,115
 Omura, Bonin Islands, 9,023
 Pago Pago, American Samoa, 5,378
 Palmyra Island, 5,621
 Papeete, Society Islands, 4,254
 Pisco, Peru, 1,207
 Ponape, Caroline Islands, 7,631
 Portland, Oregon, U.S.A., 5,764
 Prince Rupert, Canada, 6,199
 Puerto Montt, Chile, 623
 Puntarenas, Costa Rica, 2,690
 Rabaul, New Britain, 7,461
 Salina Cruz, Mexico, 3,247
 San Blas, Mexico, 3,835
 San Diego, California, U.S.A., 4,738
 San Francisco, California, U.S.A., 5,140
 San Jose, Guatemala, 3,024
 Santa Barbara, California, U.S.A., 4,875
 Sasebo, Japan (via Osumi Kaikyo), 9,836
 Seattle, Washington, U.S.A., 5,916
 Seward, Alaska, U.S.A., 6,812
 Shang-hai, China, 10,148
 Shimonoseki, Japan, 9,709
 Sitka, Alaska, U.S.A., 6,407
 Suva, Fiji Islands, 5,759
 Sydney, Australia (via Lat. 30° S.), 6,986
 Sydney, Australia (via Lat. 49° S.), 6,294
 Ta-ku, China (via Shimonoseki Kaikyo), 10,482
 Talcahuano, Chile, 241
 Ta-lien, China (via Shimonoseki Kaikyo), 10,324
 Ta-lien, China (via Tokara Kaikyo), 10,366
 Tocopilla, Chile, 663
 Truk, Caroline Islands (direct), 7,952
 Vladivostok, U.S.S.R., 9,606
 Wake Island, Pacific, 7,601
 Wellington, New Zealand, 5,036
 Yokohama, Japan, 9,280

VANCOUVER, CANADA

(49°18'00" N., 123°06'00" W.) to:

Junction Points*

Panama, Panama, 4,032
 Punta Arenas, Chile, 6,978
 Singapore, 7,078

Ports

Apia, Samoa, 4,675
 Auckland, New Zealand, 6,191
 Bellingham, Washington, U.S.A., 70
 Dutch Harbor, Alaska, 1,724
 Honolulu, Hawaii, U.S.A., 2,423
 Juneau, Alaska, U.S.A., 761
 Kobe, Japan, 4,541
 Nanaimo, Canada, 35
 Nome, Alaska, U.S.A., 2,304
 Pago Pago, American Samoa, 4,637
 Port Angeles, Washington, U.S.A., 93
 Port Hueneme, California, U.S.A., 1,102
 Portland, Oregon, U.S.A., 371
 Prince Rupert, Canada, 477
 San Francisco, California, U.S.A., 812
 Seattle, Washington, U.S.A. (via Haro Strait and Boundary Pass), 132
 Seattle, Washington, U.S.A. (via Haro Strait and Active Pass), 126
 Seward, Alaska, U.S.A., 1,249
 Sitka, Alaska, U.S.A., 823
 Skagway, Alaska, U.S.A., 1,021
 Yokohama, Japan, 4,262

VARDO, NORWAY

(70°22'30" N., 31°07'00" E.) to:

Junction Points*

Pentland Firth, Scotland, 1,253
 Skagens Odde, Denmark, 1,287

Ports

Bjornoya, Svalbard, 328
 Longyearbyen, Svalbard, 586
 Rotterdam, Netherlands, 1,513

VEJLE, DENMARK

(55°42'15" N., 9°34'00" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 106
 Skagens Odde, Denmark, 189

Ports

Goteborg, Sweden, 176
 Kobenhavn, Denmark, 149
 Lubeck, Germany, 173

VENEZIA, ITALY

(45°25'54" N., 12°18'27" E.) to:

Junction Points*

Port Said, U.A.R. (via Corinth Canal), 1,307
 Port Said, U.A.R. (south of Greece), 1,317
 Strait of Gibraltar, 1,691

Ports

Ajaccio, Corsica, 1,507
 Alexandria, U.A.R., 1,208
 Alger, Algeria, 1,264
 Alicante, Spain, 1,418
 Ancona, Italy, 124
 Annaba, Algeria, 1,044
 Banghazi, Libya, 911
 Barcelona, Spain, 1,323
 Bari, Italy, 329
 Bayrut, Lebanon (via Corinth Canal), 1,356
 Bayrut, Lebanon (south of Greece), 1,387
 Bizerte, Tunisia, 953
 Brindisi, Italy, 386
 Cagliari, Sardinia, 970
 Cartagena, Spain, 1,449
 Ceuta, Morocco, 1,672
 Dubrovnik, Yugoslavia, 320
 Genova, Italy, 1,128
 Gibraltar, 1,674
 Haifa, Israel (via Corinth Canal), 1,359
 Haifa, Israel (south of Greece), 1,383
 Iraklion, Crete, 872
 Istanbul, Turkey (via Corinth Canal), 1,073
 Istanbul, Turkey (south of Greece), 1,169
 Izmir, Turkey (via Corinth Canal), 919
 Izmir, Turkey (south of Greece), 1,015
 La Spezia, Italy, 1,093
 Livorno, Italy, 1,057
 Malaga, Spain, 1,621
 Marseille, France, 1,220
 Messina, Sicily, 647
 Napoli, Italy, 818
 Odessa, U.S.S.R. (via Corinth Canal), 1,421
 Odessa, U.S.S.R. (south of Greece), 1,518
 Oran, Algeria, 1,460
 Palermo, Sicily, 763
 Palma, Balearic Islands, 1,281
 Pescara, Italy, 201
 Piraeus, Greece (via Corinth Canal), 719
 Piraeus, Greece (south of Greece), 856
 Rijeka, Yugoslavia, 132
 Savona, Italy, 1,138
 Sayda, Lebanon (via Corinth Canal), 1,354
 Sayda, Lebanon (south of Greece), 1,382
 Sibenik, Yugoslavia, 204
 Siracusa, Sicily, 668
 Split, Yugoslavia, 221

*JUNCTION POINT.—See Preface for use of junction points.

Tarabulus, Lebanon (via Corinth Canal), 1,369
 Tarabulus, Lebanon (south of Greece), 1,399
 Tarabulus, Libya, 931
 Taranto, Italy, 526
 Thessaloniki, Greece (via Corinth Canal), 968
 Thessaloniki, Greece (south of Greece), 1,064
 Toulon, France, 1,188
 Tubruq, Libya, 980
 Tunis, Tunisia, 940
 Valencia, Spain, 1,406
 Valletta, Malta, 745
 Volos, Greece (via Corinth Canal), 909
 Volos, Greece (south of Greece), 1,005

VENICE, ITALY. See Venezia.

VENTSPILS, LATVIA
 (57°24'00" N., 21°34'00" E.) to:

Junction Points*
 Kiel Canal (east end), Germany, 434
 Skagens Odde, Denmark, 502

Ports
 Gdynia, Poland, 204
 Leningrad, U.S.S.R., 374
 Stockholm, Sweden, 174

VERACRUZ, MEXICO
 (19°12'00" N., 96°08'00" W.) to:

Junction Points*
 Panama, Panama, 1,463
 Straits of Florida, 792
 Yucatan Channel, 654

Ports
 Alvaro Obregon, Mexico, 202
 Apalachicola, Florida, U.S.A., 872
 Barranquilla, Colombia, 1,525
 Belize, British Honduras, 862
 Bluefields, Nicaragua, 1,237
 Brunswick, Georgia, U.S.A., 1,351
 Campeche, Mexico, 307
 Carmen, Mexico, 242
 Cartagena, Colombia, 1,510
 Cienfuegos, Cuba, 944
 Colon, Panama, 1,420
 Galveston, Texas, U.S.A., 623
 Guantanamo, Cuba, 1,228
 Gulfport, Mississippi, U.S.A., 800
 Habana, Cuba, 814
 Key West, Florida, U.S.A., 869
 Kingston, Jamaica, 1,210

La Guaira, Venezuela, 1,888
 Lake Charles, Louisiana, U.S.A., 688
 Limon, Costa Rica, 1,338
 Matagorda Bay, Texas, U.S.A., (entrance), 549
 Mobile, Alabama, U.S.A., 825
 New Orleans, Louisiana, U.S.A., 789
 Pensacola, Florida, U.S.A., 831
 Port Arthur, Texas, U.S.A., 659
 Port of Spain, Trinidad, 2,182
 Progreso, Mexico, 401
 Puerto Barrios, Guatemala, 985
 Puerto Cabello, Venezuela, 1,848
 Puerto Cortes, Honduras, 948
 Puerto Mexico, Mexico, 127
 San Juan, Puerto Rico, 1,780
 San Juan del Norte, Nicaragua (via inside route), 1,271
 Santa Marta, Colombia, 1,537
 Santo Domingo, Dominican Republic, 1,596
 Tampa, Florida, U.S.A., 925
 Tampico, Mexico, 218
 Tuxpan, Mexico, 134
 Willemstad, Curacao, 1,756

VGLEGORSK, U.S.S.R. See Esutoru.

VIANA DO CASTELLO, PORTUGAL
 (41°41'15" N., 8°49'30" W.) to:

Junction Points*
 Strait of Gibraltar, 472
 Ushant, France, 467

Ports
 El Ferrol del Caudillo, Spain, 155
 Horta, Azores, 935
 Lisboa, Portugal, 210

VIAREGGIO, ITALY
 (43°51'45" N., 10°14'00" E.) to:

Junction Points*
 Port Said, U.A.R., 1,716
 Strait of Gibraltar, 898

Ports
 Civitavecchia, Italy, 480
 Marseille, France, 238
 Tunis, Tunisia, 778

VIBORG, U.S.S.R. See Vyborg.

VICTORIA, CANADA
 (48°25'00" N., 123°23'30" W.) to:

Junction Points*
 Panama, Panama, 3,962

Ports
 Bellingham, Washington, U.S.A., 52
 Honolulu, Hawaii, U.S.A., 2,349
 Los Angeles, California, U.S.A., 1,091
 Nanaimo, Canada, 86
 Pago Pago, American Samoa, 4,563
 Petersburg, Alaska, U.S.A., 719
 Port Angeles, Washington, U.S.A., 20
 Prince Rupert, Canada, 531
 San Francisco, California, U.S.A., 745
 Sand Bay, Alaska, U.S.A., 2,027
 Seattle, Washington, U.S.A., 70
 Sweeper Cove, Alaska, U.S.A., 2,044
 Wrangell, Alaska, U.S.A., 697
 Yokohama, Japan, 4,194

VICTORIA, CAMEROON
 (4°00'12" N., 9°11'33" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa, 2,399
 Ushant, France, 4,126

Ports
 Lagos, Nigeria, 410
 Matadi, Republic of the Congo, 770

VICTORIA, SEYCHELLES
 (4°36'40" S., 55°29'00" E.) to:

Junction Points*
 Cape of Good Hope, Republic of South Africa (east of Madagascar), 3,007
 Singapore, 3,067

Ports
 Aden, Aden Protectorate, 1,416
 Belawan, Indonesia, 2,734
 Bombay, India, 1,749
 Colombo, Ceylon, 1,652
 Darwin, Australia, 4,494
 Diego Garcia, Chagos Archipelago, 1,032
 Fremantle, Australia, 3,752
 Malacca, Malaysia, 2,952
 Mocambique, Mozambique, 1,085
 Penang, Malaysia, 2,779
 Port Louis, Mauritius, 943
 Sabang, Indonesia, 2,468
 Zanzibar, Zanzibar, 1,011

VICTORIA, NORTH BORNEO
 (5°16'30" N., 115°14'30" E.) to:

Junction Points*
 Singapore, 757
 Sunda Strait, Indonesia, 948
 Torres Strait, Australia, 2,192

*JUNCTION POINT.—See Preface for use of junction points.

Ports
Sandakan, North Borneo, 412
Zamboanga, Philippines, 563

VIGO, SPAIN

(42°14'30" N., 8°44'00" W.) to:

Junction Points*
Bishop Rock, England, 484
Montreal, Canada (tracks C and D),
2,979
Montreal, Canada (track E), 2,870
Montreal, Canada (track F), 2,860
Strait of Gibraltar, 504
Straits of Florida, 3,811
Ushant, France, 439

Ports
Bathurst, Gambia, 1,832
Belem, Brazil, 3,398
Boston, Massachusetts, U.S.A. (track
A), 2,799
Boston, Massachusetts, U.S.A. (track
B), 2,770
Boston, Massachusetts, U.S.A. (tracks
C and D), 2,734
Buenos Aires, Argentina, 5,518
Cadiz, Spain, 463
Cape Town, Republic of South Africa,
5,322
Casablanca, Morocco, 545
Colon, Panama, 4,194
Dakar, Senegal, 1,744
Freetown, Sierra Leone, 2,223
Funchal, Madeira Island, 702
Halifax, Canada (tracks C and D),
2,422
Halifax, Canada (track E), 2,359
Halifax, Canada (track F), 2,358
Horta, Azores, 938
Huelva, Spain, 453
Lisboa, Portugal, 247
New York, New York, U.S.A. (track
A), 2,958
New York, New York, U.S.A. (track
B), 2,940
New York, New York, U.S.A. (tracks
C and D), 2,912
Norfolk, Virginia, U.S.A. (track A),
3,106
Norfolk, Virginia, U.S.A., (track B),
3,091
Norfolk, Virginia, U.S.A., (tracks C
and D), 3,075
Philadelphia, Pennsylvania, U.S.A.
(track A), 3,098
Philadelphia, Pennsylvania, U.S.A.
(track B), 3,078
Philadelphia, Pennsylvania, U.S.A.,
(tracks C and D), 3,055
Ponta Delgada, Azores, 828

Porto, Portugal, 74
Porto Grande, Cape Verde Islands,
1,737
Recife, Brazil, 3,346
Rio de Janeiro, Brazil, 4,418
San Juan, Puerto Rico, 3,228
Santa Cruz de Tenerife, Canary Is-
lands, 909
Tangier, Morocco, 516

VIIPURI, U.S.S.R. See Vyborg.

VILA RIAL DE SANTO ANTONIO,
PORTUGAL
(37°12'00" N., 7°24'30" W.) to:

Junction Points*
Strait of Gibraltar, 113
Ushant, France, 836

Ports
Casablanca, Morocco, 218
Horta, Azores, 1,046

VILLA CISNEROS, SPANISH
SAHARA
(23°37'00" N., 16°00'00" W.) to:

Junction Points*
Strait of Gibraltar, 923

Ports
Casablanca, Morocco, 769
Dakar, Senegal, 578
Porto Grande, Cape Verde Islands,
650

VILLA DO PORTO, AZORES
(36°56'00" N., 25°09'00" W.) to

Junction Points*
Bishop Rock, England, 1,128
Strait of Gibraltar, 963

Ports
Lisboa, Portugal, 771
New York, New York, U.S.A., 2,279

VILLA SAN GIOVANNI, ITALY
(38°13'00" N., 15°37'55" E.) to:

Junction Points*
Port Said, U.A.R., 944
Strait of Gibraltar, 1,047

Ports
Napoli, Italy, 173
Palermo, Sicily, 118
Taranto, Italy, 287

VILLA SANJURJO, MOROCCO
(35°14'55" N., 3°55'08" W.) to:

Junction Points*
Port Said, U.A.R., 1,868
Strait of Gibraltar, 106

Ports
Alicante, Spain, 260
Malaga, Spain, 93
Melilla, Morocco, 64

VILLAGARCIA, SPAIN
(42°36'00" N., 8°47'45" W.) to:

Junction Points*
Strait of Gibraltar, 526
Ushant, France, 433

Ports
Bilbao, Spain, 357
Horta, Azores, 946
Lisboa, Portugal, 264

VILLEFRANCHE, FRANCE
(43°42'00" N., 7°18'45" E.) to:

Junction Points*
Port Said, U.A.R., 1,455
Strait of Gibraltar, 789

Ports
Ajaccio, Corsica, 138
Barcelona, Spain, 277
Genova, Italy, 88
Livorno, Italy, 133
Napoli, Italy, 369

VINH CAM RANH, VIETNAM
(11°53'00" N., 109°09'00" E.) to:

Junction Points*
Singapore, 786
Wetar Passage, Indonesia (via Selat
Karimata and Selat Sapudi), 2,106

Ports
Apra, Guam, 2,112
Darwin, Australia, 2,169
Jakarta, Indonesia, 1,103
Hai-kou, Hai-nan Tao, 610
Haiphong, Vietnam, 597
Hong Kong, B.C.C., 707
Kao-hsiung Chiang, Taiwan, 915
Kobe, Japan, 2,013
Krung Thep, Thailand, 817
Manila, Philippines, 710
Shang-hai, China, 1,520
Surabaya, Indonesia, 1,251

*JUNCTION POINT.—See Preface for use of junction points.

VISAKHAPATNAM, INDIA

(17°41'00" N., 83°17'00" E.) to:

Ports

Calcutta, India, 458
Colombo, Ceylon, 880
Madras, India, 332

VITORIA, BRAZIL

(20°19'20" S., 40°20'30" W.) to:

Ports

Baltimore, Maryland, U.S.A., 4,581
New York, New York, U.S.A., 4,507
4,554
Philadelphia, Pennsylvania, U.S.A.,
Salvador, Brazil, 477

VIZAGAPATAM. See VISAKHAPATNAM, INDIA.**VLADIVOSTOK, U.S.S.R.**

(43°06'30" N., 131°53'00" E.) to:

Junction Points*

Panama, Panama (via La Perouse Strait and south of Aleutian Islands), 7,741
Panama, Panama (via La Perouse Strait and north of Aleutian Islands), 7,757
Panama, Panama (via Tsugaru Kaikyo), 7,833
Singapore, 3,004
Sunda Strait, Indonesia, 3,357
Wetar Passage, Indonesia (via Selat Manipa), 3,133

Ports

Aleksandrovsk, Sakhalin, 713
Apra, Guam (via Shimonoseki Kaikyo), 2,019
Apra, Guam (via Tsugaru Kaikyo), 2,155
Auckland, New Zealand, 5,516
Bukhta Broutona, Kuril Islands, 934
Cebu, Philippines, 2,026
Changjon, Korea, 319
Ching-tao, China, 998
Chin-huang-tao, China (via Maenggol Sudo), 1,151
Chinnampo, Korea (via Changjuk Sudo), 997
Chongjin, Korea, 135
Darwin, Australia, 3,426
De-Kastri, U.S.S.R., 737
Djakarta, Indonesia, 3,338

Dutch Harbor, Alaska, U.S.A., 2,518
Guayaquil, Ecuador, 8,044
Hai-kou, Hai-nan Tao (north of Taiwan), 1,899
Hakodate, Japan, 437
Higashi-Iwase, Japan, 471
Hong Kong, B.C.C., 1,646
Honolulu, Hawaii, U.S.A. (via Tsugaru Kaikyo), 3,725
Hsia-men, China, 1,393
Hungnam, Korea, 298
Iloilo, Philippines, 2,048
Inchon, Korea (via Maemut Sudo), 911
Kasatka, Japan, 779
Kimchaek, Korea, 206
Kobe, Japan, 805
Kodiak, Alaska, U.S.A., 3,105
Krung Thep, Thailand (outer bar), 3,035
Kuang-chou, China, 1,728
Kushiro, Japan, 624
Lo-hsing-ta Mao-ti, China, 1,264
Los Angeles, California, U.S.A., 4,981
Lu-shun, China (via Maenggol Sudo), 1,050
Maizuru, Japan, 485
Manila, Philippines, 1,912
Masan, Korea, 542
Matsugahama, Japan (via Tsugaru Kaikyo), 730
Midway Island, Pacific, 2,612
Mokpo, Korea, 726
Nagasaki, Japan, 657
Nanao, Japan, 460
Niigata, Japan, 453
Noumea, New Caledonia, 4,590
Omura, Bonin Islands (via Shimonoseki Kaikyo), 1,292
Osaka, Japan, 815
Pago Pago, American Samoa, 4,739
Palmyra Island, 4,136
Papeete, Society Islands, 5,663
Petropavlovsk, U.S.S.R., 1,348
Portland, Oregon, U.S.A. (via La Perouse Strait and north of Aleutian Islands), 4,278
Pusan, Korea, 514
Rumoi, Japan, 452
Sai Gon, Vietnam, 2,501
Sakata, Japan, 442
San Diego, California, U.S.A., 5,062
San Francisco, California, U.S.A. (via La Perouse Strait and Proliv Kruzenshterna), 4,563
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 4,664
San Francisco, California, U.S.A. (via La Perouse Strait and Unimak Pass), 4,570

Seattle, Washington, U.S.A., (via Tsugaru Kaikyo and south of Aleutian Islands), 4,396
Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,210
Shang-hai, China (north of Cheju Do), 998
Shang-hai, China (south of Cheju Do), 997
Shan-tou, China, 1,496
Shimonoseki, Japan, 565
Shelekhovo, Kuril Islands, 1,121
Sitka, Alaska, U.S.A., 3,585
Slavnoye, Kuril Islands, 780
Sovetskaya Gaven, U.S.S.R., 593
Surabaya, Indonesia, 3,357
Suva, Fiji Islands, 4,626
Sydney, Australia, 5,105
Ta-ku, China, 1,212
Ta-len, China, 1,057
Tan-shui, Taiwan, 1,225
Tomari, Japan, 724
Truk, Caroline Islands, 2,593
Tsuruga, Japan, 490
Ulsan, Korea, 486
Valparaiso, Chile, 9,606
Wake Island, Pacific, 2,305
Wei-hai-wei, China (via Maenggol Sudo), 975
Wonsan, Korea, 324
Wotje Island, Marshall Islands, 2,928
Yen-tai, China (via Maenggol Sudo), 1,009
Yokohama, Japan, 952

VLISSINGEN, NETHERLANDS
(51°26'30" N., 3°36'00" E.)

Subtract 47 miles from Antwerpen, Belgium distances.

VLONES, ALBANIA. See Vlores.**VLORES, ALBANIA**

(40°26'30" N., 19°28'30" E.) to:

Junction Points*

Port Said, U.A.R., 973
Strait of Gibraltar, 1,311

Ports

Piraeus, Greece (via Corinth Canal), 295
Split, Yugoslavia, 252
Taranto, Italy, 146

VOLO, GREECE. See Volos.

*JUNCTION POINT.—See Preface for use of junction points.

VOLOS, GREECE

(39°21'25" N., 22°56'37" E.) to:

Junction Points*

Port Said, U.A.R., 683

Strait of Gibraltar (via Corinth Canal), 1,640

Strait of Gibraltar (south of Greece), 1,657

Ports

Ajaccio, Corsica (via Corinth Canal), 1,014

Ajaccio, Corsica (south of Greece), 1,056

Alexandria, U.A.R., 620

Alexandroupolis, Greece, 205

Alger, Algeria (via Corinth Canal), 1,211

Alger, Algeria (south of Greece), 1,228

Alicante, Spain (via Corinth Canal), 1,376

Alicante, Spain (south of Greece), 1,395

Ancona, Italy (via Corinth Canal), 798

Ancona, Italy (south of Greece), 894

Annaba, Algeria (via Corinth Canal), 987

Annaba, Algeria (south of Greece), 1,004

Banghazi, Libya, 552

Barcelona, Spain (via Corinth Canal), 1,280

Barcelona, Spain (south of Greece), 1,322

Bari, Italy (via Corinth Canal), 591

Bari, Italy (south of Greece), 687

Bayrut, Lebanon, 725

Bizerte, Tunisia (via Corinth Canal), 882

Bizerte, Tunisia (south of Greece), 899

Brindisi, Italy (via Corinth Canal), 533

Brindisi, Italy (south of Greece), 629

Cagliari, Sardinia (via Corinth Canal), 927

Cagliari, Sardinia (south of Greece), 969

Cartagena, Spain (via Corinth Canal), 1,403

Cartagena, Spain (south of Greece), 1,420

Ceuta, Morocco (via Corinth Canal), 1,620

Ceuta, Morocco (south of Greece), 1,637

Genova, Italy (via Corinth Canal), 1,085

Genova, Italy (south of Greece), 1,127

Gibraltar (via Corinth Canal), 1,623

Gibraltar (south of Greece), 1,640

Haifa, Israel, 728

Iraklion, Crete, 292

Istanbul, Turkey, 329

Izmir, Turkey, 226

Kavala, Greece, 162

Khalkis, Greece, 88

La Spezia, Italy (via Corinth Canal), 1,050

La Spezia, Italy (south of Greece), 1,091

Limin Khίου, Greece, 193

Livorno, Italy (via Corinth Canal), 1,014

Livorno, Italy (south of Greece), 1,056

Malaga, Spain (via Corinth Canal), 1,570

Malaga, Spain (south of Greece), 1,587

Marseille, France (via Corinth Canal), 1,177

Marseille, France (south of Greece), 1,219

Messina, Sicily (via Corinth Canal), 604

Messina, Sicily (south of Greece), 645

Napoli, Italy (via Corinth Canal), 775

Napoli, Italy (south of Greece), 817

Odessa, U.S.S.R., 677

Oran, Algeria (via Corinth Canal), 1,408

Oran, Algeria (south of Greece), 1,426

Palermo, Sicily (via Corinth Canal), 720

Palermo, Sicily (south of Greece), 761

Palma, Balearic Islands (via Corinth Canal), 1,238

Palma, Balearic Islands (south of Greece), 1,280

Piraeus, Greece, 200

Rijeka, Yugoslavia (via Corinth Canal), 865

Rijeka, Yugoslavia (south of Greece), 964

Savona, Italy (via Corinth Canal), 1,096

Savona, Italy (south of Greece), 1,137

Sibenik, Yugoslavia (via Corinth Canal), 737

Sibenik, Yugoslavia (south of Greece), 836

Siracusa, Sicily (via Corinth Canal), 608

Siracusa, Sicily (south of Greece), 634

Split, Yugoslavia (via Corinth Canal), 722

Split, Yugoslavia (south of Greece), 821

Tarabulus, Libya, 789

Taranto, Italy (via Corinth Canal), 553

Taranto, Italy (south of Greece), 642

Thessaloniki, Greece, 132

Toulon, France (via Corinth Canal), 1,145

Toulon, France (south of Greece), 1,187

Trieste, Free Territory (via Corinth Canal), 898

Trieste, Free Territory (south of Greece), 997

Tunis, Tunisia (via Corinth Canal), 869

Tunis, Tunisia (south of Greece), 886

Valencia, Spain (via Corinth Canal), 1,364

Valencia, Spain (south of Greece), 1,393

Valletta, Malta, 672

Venezia, Italy (via Corinth Canal), 909

Venezia, Italy (south of Greece), 1,005

VUNG TAU, VIETNAM

(10°20'30" N., 107°04'00" E.)

Subtract 45½ miles from Sai Gon distances.

VYBORG, U.S.S.R.

(60°42'30" N., 28°44'00" E.)

Add 6¾ miles to Vysotsk distances.

VYSOTSK, U.S.S.R.

(60°38'00" N., 28°34'00" E.) to:

Junction Points*

Skagens Odde (via Store Baelt), 923

Skagens Odde (via The Sound), 803

Ports

Kotka, Finland, 69

Oslo, Norway (via Store Baelt), 1,047

Oslo, Norway (via The Sound), 925

WAKAMATSU, JAPAN

(33°55'00" N., 130°49'00" E.) to:

Ports

Kure, Japan, 125

Maizuru, Japan, 299

Pusan, Korea, 120

*JUNCTION POINT.—See Preface for use of junction points.

Sasebo, Japan, 136
Shang-hai, China, 541

WAKE ISLAND, PACIFIC
(19°18'00" N., 166°35'00" E.) to:

Junction Points*
Panama, Panama, 6,673
Singapore, 3,885

Ports
Apra, Guam, 1,334
Auckland, New Zealand, 3,409
Baie du Controleur, Marquesas, 3,589
Canton, Phoenix Islands, 1,843
Ching-tao, China, 2,674
Darwin, Australia, 3,187
Dutch Harbor, Alaska, U.S.A., 2,463
Guayaquil, Ecuador, 6,843
Hai-kou, Hai-nan Tao, 3,168
Hong Kong, B.C.C., 2,940
Honolulu, Hawaii, U.S.A., 2,004
Howland Island, 1,485
Jaluit, Marshall Islands, 831
Kodiak, Alaska, U.S.A., 2,961
Koniya, Ryukyu Islands, 2,107
Manila, Philippines, 2,772
Midway Island, 1,034
Noumea, New Caledonia, 2,551
Omura, Bonin Islands, 1,426
Pago Pago, American Samoa, 2,436
Palmyra Island, 1,996
Papeete, Society Islands, 3,401
Sai Gon, Vietnam (via San Bernardino Strait), 3,580
San Diego, California, U.S.A., 4,112
San Francisco, California, U.S.A., 3,821
Seattle, Washington, U.S.A., 3,820
Shang-hai, China, 2,550
Sitka, Alaska, U.S.A., 3,405
Surabaya, Indonesia, 3,641
Suva, Fiji Islands, 2,501
Sydney, Australia, 3,346
Truk, Caroline Islands, 1,117
Valparaiso, Chile, 7,601
Vladivostok, U.S.S.R., 2,305
Yokohama, Japan, 1,740

WAKKANAI, JAPAN
(45°25'00" N., 141°41'20" E.) to:

Ports
Bukhta Broutona, Kuril Islands, 456
Kasatka, Japan, 310
Matsugahama, Japan, 294
Shelekhovo, Kuril Islands, 643
Slavnoye, Kuril Islands, 301
Tomari, Japan, 246

WALLAROO, AUSTRALIA
(33°55'00" S., 137°36'00" E.) to:

Junction Points*
Cape Leeuwin, Australia, 1,153
Singapore, 3,500

Ports
Noumea, New Caledonia, 2,099
Rabaul, New Britain, 2,911
Sydney, Australia, 1,084

WALVISBAAI, SOUTHWEST AFRICA
(22°57'00" S., 14°29'45" E.) to:

Ports
Baltimore, Maryland, U.S.A., 6,385
Boston, Massachusetts, U.S.A., 6,131
Luderitz Bay, Southwest Africa, 240
Mocamedes, Angola, 518
New York, New York, U.S.A., 6,228
Philadelphia, Pennsylvania, U.S.A., 6,318

WALVIS BAY, SOUTHWEST AFRICA, See Walvisbaai.

WARNEMUNDE, GERMANY
(54°11'00" N., 12°05'30" E.)

Subtract 7 miles from Rostock distances.

WASHINGTON, DISTRICT OF COLUMBIA, U.S.A.
(38°52'30" N., 77°01'30" W.) to:

Junction Points*
Bishop Rock, England (track A), 3,338
Bishop Rock, England (track B), 3,304
Bishop Rock, England (track C), 3,243
Fastnet, Ireland (track A), 3,244
Fastnet, Ireland (track B), 3,207
Fastnet, Ireland (track C), 3,137
Inishtrahull, Ireland (track A), 3,362
Inishtrahull, Ireland (track B), 3,326
Inishtrahull, Ireland (track C), 3,235
Panama, Panama, 1,957
Pentland Firth, Scotland (track A), 3,584
Pentland Firth, Scotland (track B), 3,530
Pentland Firth, Scotland (track C), 3,415
Strait of Gibraltar (track A), 3,492
Strait of Gibraltar (track B), 3,484
Strait of Gibraltar (direct), 3,471

Ports
Bordeaux, France (track A), 3,630
Bordeaux, France (track B), 3,601
Bordeaux, France (track C), 3,558
Cartagena, Colombia (via Windward Passage and Crooked Island Passage), 1,794
Hamilton, Bermuda, 806
Recife, Brazil, 3,787

WATERFORD, IRELAND
(52°15'50" N., 7°07'00" W.) to:

Junction Points*
Bishop Rock, England, 137
Fastnet, Ireland, 110
Inishtrahull, Ireland, 276

Ports
Dublin, Ireland, 113
Liverpool, England, 189

WEI-HAI-WEI, CHINA
(37°30'00" N., 122°08'30" E.) to:

Junction Points*
Singapore, 2,548

Ports
Aleksandrovsk, Sakhalin, 1,579
Apra, Guam (via Tokara Kaikyo), 1,901
Cebu, Philippines, 1,679
Ching-tao, China, 205
Chin-Huang-tao, China, 191
Chinnampo, Korea, 172
Djakarta, Indonesia, 2,860
Hakodate, Japan, 1,169
Hong Kong, B.C.C., 1,190
Honolulu, Hawaii, U.S.A. (via Osumi Kaikyo), 4,449
Hsia-men, China, 931
Iloilo, Philippines, 1,701
Inchon, Korea, 238
Kobe, Japan, 806
Kuang-chou, China, 1,273
Lo-hsing-ta Mao-ti, China, 801
Manila, Philippines (east of Taiwan), 1,498
Manila, Philippines (via Formosa Strait), 1,508
Mokpo, Korea (via south of Kasa Do), 308
Nagasaki, Japan, 526
Petropavlovsk, U.S.S.R., 2,192
Pusan, Korea, 474
San Francisco, California, U.S.A. (via Osumi Kaikyo), 5,625
San Francisco, California, U.S.A. (via Tsugaru Kaikyo), 5,402

*JUNCTION POINT.—See Preface for use of junction points.

Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and composite route), 5,119
 Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and Unimak Pass), 5,059
 Seattle, Washington, U.S.A. (via La Perouse Strait, Proliv Chetverty Kurilskiy and Unimak Pass), 5,054
 Shang-hai, China (via South Channel), 483
 Shan-tou, China, 1,040
 Shimonoseki, Japan, 562
 Ta-ku, China, 237
 Tan-shui, Taiwan, 784
 Vladivostok, U.S.S.R., 975
 Wonsan, Korea (via Maenggol Sudo), 779
 Yokohama, Japan (via Bungo Suido and Shimonoseki Kaikyo), 1,106

WELLINGTON, NEW ZEALAND
 (41°17'00" S., 174°47'00" E.) to:

Junction Points*
 Cape Leeuwin, Australia, 2,863
 Panama, Panama, 6,505
 Punta Arenas, Chile (via Lat. 49° S.), 4,639
 Punta Arenas, Chile (via Lat. 50° S.), 4,634
 Torres Strait, Australia (via Raine Island entrance), 2,652
 Wilson Promontory, Australia, 1,338

Ports
 Aden, Aden Protectorate (south of Chagos Archipelago and Tasmania), 7,814
 Albany, Australia (via south of Tasmania), 2,729
 Apia, Samoa, 1,872
 Auckland, New Zealand, 563
 Avarua, Cook Islands, 1,804
 Bluff Harbor, New Zealand, 455
 Brisbane, Australia, 1,453
 Cairns Harbor, Australia, 2,122
 Callao, Peru, 5,721
 Chimbote, Peru, 5,781
 Fanning Island, 3,114
 Gladstone Harbor, Australia, 1,678
 Hobart, Tasmania, 1,288
 Honolulu, Hawaii, U.S.A., 4,113
 Kiama Harbor, Australia, 1,213
 Lae, New Guinea, 2,635
 Launceston, Tasmania, 1,326
 Lautoka Harbor, Fiji Islands, 1,554
 Los Angeles, California, U.S.A., 5,857
 Lucinda, Australia, 2,102
 Lyttelton, New Zealand, 174
 Pago Pago, American Samoa, 1,848

Papeete, Society Islands, 2,348
 Port Kembla, Australia, 1,229
 Port Louis, Mauritius, 5,900
 Portland, Oregon, U.S.A., 6,327
 Rockhampton, Australia, 1,685
 Salina Cruz, Mexico, 6,061
 San Francisco, California U.S.A., 5,905
 Seattle, Washington, U.S.A., 6,433
 Suva, Fiji Islands, 1,476
 Sydney, Australia, 1,234
 Urangan, Australia, 1,581
 Valparaiso, Chile (via Lat. 49° S.), 5,066
 Yokohama, Japan, 5,041

WENCHOW, CHINA. See Yung-chia.

WETAR PASSAGE, INDONESIA*
 (8°19'00" S., 127°27'00" E.) to:

Junction Points*
 Singapore (via Selat Riouw and Selat Karimata), 1,587
 Sunda Strait, Indonesia, 1,330
 Torres Strait, Australia, 881

Ports
 Balikpapan, Borneo, 870
 Chinnampo, Korea (via Selat Manipa and Molucca Passage), 2,861
 Darwin, Australia (west of Bathurst Island), 326
 Djakarta, Indonesia, 1,266
 Inchon, Korea (via Selat Manipa and Molucca Passage), 2,767
 Lingkas, Indonesia, 1,161
 Makasar, Celebes, 614
 Mokpo, Korea (via Molucca Passage), 2,632
 Petropavlovsk, U.S.S.R. (via Selat Manipa and Dampier Strait), 4,106
 Pusan, Korea (via Selat Manipa and Molucca Passage), 2,632
 Semarang, Indonesia, 1,067
 Shang-hai, China (via Basilan Strait, Mindoro Strait, east of Taiwan, and Pai-chieh Hsia), 2,553
 Surabaya, Indonesia (north of Madura), 928
 Surabaya, Indonesia (south of Madura), 880
 Vinh Cam Ranh, Vietnam, 2,106
 Vladivostok, U.S.S.R. (via Selat Manipa), 3,133
 Wonsan, Korea (via Selat Manipa and Molucca Passage), 3,100
 Wyndham, Australia, 431
 Zamboanga, Philippines (via Selat Manipa and Selat Bangka), 995

WETAR STRAIT, INDONESIA. See Wetar Passage.

WEYMOUTH, ENGLAND. See Portland.

WHAMPOA, CHINA. See Huangpu.

WHITTIER, ALASKA, U.S.A.
 (60°46'48" N., 148°39'36" W.) to:

Junction Points*
 Panama, Panama, 4,958

Ports
 Barrow, Alaska, U.S.A., 1,897
 Dutch Harbor, Alaska, U.S.A., 817
 Honolulu, Hawaii, U.S.A., 2,474
 Ketchikan, Alaska, U.S.A., 1,839
 Seattle, Washington, U.S.A., 1,241
 Wrangell, Alaska, U.S.A., 642
 Yakutat, Alaska, U.S.A., 295

WHYALLA, AUSTRALIA
 (33°01'15" S., 137°36'00" E.) to:

Junction Points*
 Lombok Strait, Indonesia, 2,782
 Singapore, 3,546

Ports
 Adelaide, Australia, 245
 Melbourne, Australia, 665
 Rabaul, New Britain, 2,957

WILHELMSHAVEN, GERMANY
 (53°31'00" N., 8°08'30" E.) to:

Junction Points*
 Bishop Rock, England, 651
 Kiel Canal (east end), Germany, 126
 Pentland, Firth, Scotland, 501
 Skagens Odde, Denmark, 314
 Ushant, France, 639

Ports
 Aberdeen, Scotland, 419
 Amsterdam, Netherlands, 210
 Antwerpen, Belgium, 324
 Bergen, Norway, 441
 Cherbourg, France, 472
 Dover, England, 328
 Dundee, Scotland, 430
 Dunkerque, France, 308
 Egersund, Norway, 306

*JUNCTION POINT.—See Preface for use of junction points.

Emden, Germany, 120
 Esbjerg, Denmark, 129
 Hamburg, Germany, 111
 Hartlepool, England, 348
 Harwich, England, 296
 Hull, England, 323
 Inverness, Scotland, 508
 Kristiansand, Norway, 286
 Le Havre, France, 440
 Leith, Scotland, 435
 London, England, 362
 Newcastle, England, 367
 Oostende, Belgium, 286
 Oslo, Norway, 421
 Plymouth, England, 557
 Portland, England, 483
 Portsmouth, England, 433
 Rotterdam, Netherlands, 243
 Southampton, England, 451
 Stavanger, Norway, 360
 Zeebrugge, Belgium, 274

WILLEMSTAD, CURACAO

(12°07'00" N., 68°56'00" W.) to:

Junction Points*

Bishop Rock, England, 3,797
 Fastnet, Ireland, 3,708
 Montreal, Canada (via Cabot Strait), 2,866
 Panama, Panama, 742
 Strait of Gibraltar, 3,685
 Straits of Florida (via Windward Passage), 1,184
 Ushant, France, 3,821
 Yucatan Channel, 1,094

Ports

Alvaro Obregon, Mexico, 1,635
 Baltimore, Maryland, U.S.A., 1,733
 Barahona, Dominican Republic, 395
 Barranquilla, Colombia, 389
 Belize, British Honduras, 1,178
 Boston, Massachusetts, U.S.A. (via Mona Passage), 1,881
 Caldera Bay, Dominican Republic, 392
 Campeche, Mexico, 1,527
 Cap Haitien, Haiti (via Windward Passage), 697
 Cap Haitien, Haiti (via Mona Passage), 674
 Cape Town, Republic of South Africa, 5,811
 Carmen, Mexico, 1,599
 Cartagena, Colombia, 471
 Castries, St. Lucia, 489
 Charleston, South Carolina, U.S.A. (via Windward Passage), 1,446
 Charleston, South Carolina, U.S.A. (via Mona Passage), 1,472

Charlotte Amalie, Virgin Islands, 457
 Cienfuegos, Cuba, 900
 Colon, Panama, 698
 Fort de France, Martinique, 495
 Guantanamo, Cuba, 595
 Habana, Cuba, 1,144
 Haina, Dominican Republic, 394
 Horta, Azores, 2,683
 Isabel Segunda, Isla de Vieques, 446
 Key West, Florida, U.S.A. (via Old Bahama Channel), 1,134
 La Guaira, Venezuela, 150
 La Romana, Dominican Republic, 391
 Lagos, Nigeria, 4,359
 Manzanillo, Cuba, 746
 Maracaibo, Venezuela, 222
 New York, New York, U.S.A., 1,771
 Norfolk, Virginia, U.S.A., 1,611
 Paramaribo, Surinam, 955
 Philadelphia, Pennsylvania, U.S.A. (via Mona Passage), 1,762
 Pointe a Pitre, Guadeloupe, 517
 Ponce, Puerto Rico, 399
 Port au Prince, Haiti, 647
 Port of Spain, Trinidad, 456
 Portland, Maine, U.S.A., 1,921
 Puerto Cabello, Venezuela, 116
 Roosevelt Roads, Puerto Rico, 440
 San Juan, Puerto Rico (west end of Curacao, and via Mona Passage), 486
 San Juan del Norte, Nicaragua, 882
 Santiago de Cuba, Cuba, 627
 Santo Domingo, Dominican Republic, 397
 Savannah, Georgia, U.S.A., 1,444
 Takoradi, Ghana, 4,040
 Turiamo, Venezuela, 124
 Tuxpan, Mexico, 1,786
 Veracruz, Mexico, 1,756

WILMINGTON, DELAWARE, U.S.A.
(39°43'12" N., 75°31'30" W.)

Subtract 26 miles from Philadelphia distances.

WILMINGTON, NORTH CAROLINA, U.S.A.

(34°14'00" N., 77°57'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 3,379
 Bishop Rock, England (track B), 3,352
 Bishop Rock, England (track C), 3,304
 Fastnet, Ireland (track A), 3,288
 Fastnet, Ireland (track B), 3,256
 Fastnet, Ireland (track C), 3,195
 Inishtrahull, Ireland (track A), 3,414
 Inishtrahull, Ireland (track B), 3,375
 Inishtrahull, Ireland (track C), 3,293

Panama, Panama (via Crooked Island Passage and Windward Passage), 1,656
 Pentland Firth, Scotland (track A), 3,608
 Pentland Firth, Scotland (track B), 3,579
 Pentland Firth, Scotland (track C), 3,473
 Punta Arenas, Chile (via east of South America), 6,881
 Strait of Gibraltar (track A), 3,536
 Strait of Gibraltar (track B), 3,533
 Strait of Gibraltar (track C), 3,538
 Straits of Florida, 761

Ports

Bordeaux, France (track A), 3,674
 Bordeaux, France (track B), 3,650
 Bordeaux, France (track C), 3,616
 Buenos Aires, Argentina, 5,805
 Cape Town, Republic of South Africa, 6,804
 Cartagena, Colombia, 1,494
 Colon, Panama (via Crooked Island Passage and Windward Passage), 1,613
 Georgetown, British Guiana, 2,011
 Habana, Cuba, 767
 Halifax, Canada, 1,016
 Hamilton, Bermuda, 746
 Kingston, Jamaica (via Crooked Island Passage and Windward Passage), 1,115
 Limon, Costa Rica, 1,688
 Montevideo, Uruguay, 5,691
 Nassau, Bahamas, 561
 Paramaribo, Surinam, 2,148
 Port of Spain, Trinidad, 1,703
 Porto Grande, Cape Verde Islands, 3,057
 Rio de Janeiro, Brazil, 4,704
 Salvador, Brazil, 4,023
 San Juan, Puerto Rico, 1,153
 Santiago de Cuba, Cuba, 1,003
 Santo Domingo, Dominican Republic, 1,210

WILSON PROMONTORY, AUSTRALIA*

(39°10'00" S., 146°26'00" E.) to:

Junction Points*

Cape Leeuwin, Australia, 1,524
 Panama, Panama (via Cook Strait), 7,818
 Panama, Panama (via Foveaux Strait), 7,770
 Punta Arenas, Chile (via Foveaux Strait and Lat. 49° S.), 5,820

*JUNCTION POINT.—See Preface for use of junction points.

Punta Arenas, Chile (via Lat. 60° S. and south of Steward Island), 5,305
Torres Strait, Australia (via Capricorn Channel and inner route), 2,193

Ports

Adelaide, Australia, 537
Auckland, New Zealand, 1,503
Bluff Harbor, New Zealand, 1,133
Brisbane, Australia, 931
Burnie Harbor, Australia, 116
Cairns Harbor, Australia, 1,649
Callao, Peru (via Lat. 49° S.), 6,939
Catherine Hill Bay, Australia, 467
Honolulu, Hawaii, U.S.A., 4,792
Kiama Harbor, Australia, 379
Lautoka Harbor, Fiji Islands, 2,070
Los Angeles, California, U.S.A., 6,879
Lucinda, Australia, 1,621
Melbourne, Australia, 154
Pago Pago, American Samoa, 2,707
Papeete, Society Islands, 3,546
Portland, Oregon, U.S.A., 7,121
Rockhampton, Australia, 1,213
San Diego, California, U.S.A., 6,873
San Francisco, California, U.S.A., 6,820
Seattle, Washington, U.S.A., 7,185
Strahan, Australia, 254
Suva, Fiji Islands, 2,088
Sydney, Australia, 440
Townsville, Australia, 1,499
Uran, Australia, 1,100
Valparaiso, Chile (via Lat. 60° S.), 6,031
Wellington, New Zealand, 1,338

WISMAR, GERMANY

(53°54'30" N., 11°26'30" E.) to:

Junction Points*

Kiel Canal (east end), Germany, 84
Skagens Odde, Denmark, 281

Ports

Kobenhavn, Denmark, 132
Liepaja, Latvia, 379
Stockholm, Sweden, 101

WOMENS BAY, ALASKA, U.S.A.

(57°42'30" N., 152°31'30" W.)

Via north of Woody Island. Add 6 miles to Kodiak distances.

WONSAN, KOREA

(39°10'00" N., 127°26'30" E.) to:

Junction Points*

Panama, Panama, 8,038
Singapore, 2,808

Sunda Strait, Indonesia, 3,161
Wetar Passage, Indonesia (via Molucca Passage and Selat Manipa), 3,100

Ports

Aleksandrovsk, U.S.S.R., 972
Ching-tao, China, 802
Ching-huang-tao, China, 955
Chinnampo, Korea (via Maenggol Sudo), 801
Darwin, Australia (via Molucca Passage), 3,242
Djakarta, Indonesia, 3,142
Hakodate, Japan, 638
Hong Kong, B.C.C., 1,450
Honolulu, Hawaii, U.S.A. (via Tsugaru Kaikyo), 3,933
Hsia-men, China, 1,191
Inchon, Korea (via Maenggol Sudo), 707
Krung Thep, Thailand (outer bar), 2,885
Lo-hsing-ta Mao-ti, China, 1,068
Los Angeles, California, U.S.A., 5,181
Lu-shun, China (via Maenggol Sudo), 854
Manila, Philippines, 1,708
Mokpo, Korea (via Maenggol Sudo), 530
Nagasaki, Japan, 452
Osaka, Japan, 627
Pago Pago, American Samoa (via Bungo Suido), 4,816
Petrovsk, U.S.S.R., 1,609
Pusan, Korea, 308
Sai Gon, Vietnam, 2,305
San Francisco, California, U.S.A., 4,866
Seattle, Washington, U.S.A. (via Tsugaru Kaikyo and Lat. 50° N.), 4,601
Shang-hai, China (north of Cheju Do and via South Channel), 797
Shan-tou, China, 1,300
Ta-ku, China, 1,007
Ta-lien, China (via Maenggol Sudo), 848
Tongyeong, Korea, 358
Vladivostok, U.S.S.R., 324
Wei-hai-wei, China (via Maenggol Sudo), 779
Yen-tai, China, 813
Yokohama, Japan (via Bungo Suido), 921

WORKINGTON, ENGLAND

(54°39'00" N., 3°34'00" W.) to:

Junction Points*

Bishop Rock, England, 308
Fastnet, Ireland, 310
Inishtrahull, Ireland, 148

Ports

Belfast, Ireland, 87
Cardiff, Wales, 299

WOTHO, MARSHALL ISLANDS

(10°09'00" N., 165°56'00" E.) to:

Junction Points*

Panama, Panama, 4,882
Singapore, 3,614

Ports

Apra, Guam, 1,294
Honolulu, Hawaii, U.S.A., 1,470

WOTJE ISLAND, MARSHALL ISLANDS

(9°27'00" N., 170°14'00" E.) to:

Ports

Apra, Guam, 1,547
Honolulu, Hawaii, U.S.A., 1,992
Manila, Philippines, 3,027
Noumea, New Caledonia, 1,972
Pago Pago, American Samoa, 1,856
Suva, Fiji Islands, 1,880
Vladivostok, U.S.S.R., 2,928
Yokohama, Japan, 2,318

WRANGELL, ALASKA, U.S.A.

(56°28'00" N., 132°25'00" W.) to:

Ports

Seattle, Washington, U.S.A., 713
Sitka, Alaska, U.S.A., 170
Skagway, Alaska, U.S.A., 231
Victoria, Canada, 697
Whittier, Alaska, U.S.A., 642

WRECK BAY. See Archipelago de Colon.

WU-HU, CHINA

(31°20'00" N., 118°21'00" E.)

Add 227 miles to Shang-hai distances for ports outside the Chang Chiang (Yangtze River).

WU-SUNG, CHINA

(31°33'30" N., 121°30'30" E.)

Subtract 14 miles from Shang-hai distances.

*JUNCTION POINT.—See Preface for use of junction points.

WYNDHAM, AUSTRALIA
 (15°27'30" S., 128°06'00" E.) to:

 Junction Points*
 Wetar Passage, Indonesia, 431

 Ports
 Darwin, Australia, 274
 Fremantle, Australia, 1,780

YAKUTAT, ALASKA, U.S.A.
 (59°33'00" N., 139°45'00" W.) to:

 Ports
 Seattle, Washington, U.S.A., 998
 Seward, Alaska, U.S.A., 312
 Sitka, Alaska, U.S.A., 231
 Valdez, Alaska, U.S.A., 287
 Whittier, Alaska, U.S.A., 295

YAMPI SOUND, AUSTRALIA
 (16°08'00" S., 123°38'00" E.) to:

 Junction Points*
 Cape Leeuwin, Australia, 1,588
 Torres Strait, Australia, 1,283

 Ports
 Darwin, Australia, 1,457
 Fremantle, Australia, 586

YAP, CAROLINE ISLANDS
 (9°30'30" N., 138°08'00" E.) to:

 Ports
 Apra, Guam, 458
 Honolulu, Hawaii, U.S.A., 3,757
 Manila, Philippines, 1,154
 Noumea, New Caledonia, 2,568
 Papeete, Society Islands, 4,585
 Rabaul, New Britain, 1,196
 Suva, Fiji Islands, 2,933
 Tacloban, Philippines, 790
 Truk, Caroline Islands, 851
 Yokohama, Japan, 1,571

YARMOUTH, CANADA
 (43°50'00" N., 66°07'30" W.) to:

 Ports
 Boston, Massachusetts, U.S.A., 237
 Colon, Panama, 2,210
 Kingston, Jamaica, 1,710
 New York, New York, U.S.A. (Nan-
 tucket Light Vessel), 464
 New York, New York, U.S.A. (via Pol-
 lock Rip Channel), 440
 Norfolk, Virginia, U.S.A., 656

 Philadelphia, Pennsylvania, U.S.A.,
 616
 Portland, Maine, U.S.A., 185
 San Juan, Puerto Rico, 1,527
 Sydney, Canada, 416

YEN-TAI, CHINA
 (37°33'15" N., 121°23'30" E.) to:

 Junction Points*
 Singapore, 2,582

 Ports
 Aleksandrovsk, U.S.S.R. (via Maeng-
 gol Sudo), 1,613
 Apra, Guam (via Tokara Kaikyo),
 1,935
 Cebu, Philippines, 1,713
 Ching-tao, China, 239
 Ching-huang-tao, China, 168
 Chinnampo, Korea, 205
 Djakarta, Indonesia, 2,894
 Hakodate, Japan, 1,203
 Hong Kong, B.C.C., 1,224
 Honolulu, Hawaii, U.S.A. (via Osumi
 Kaikyo), 4,483
 Hsia-men, China, 978
 Iloilo, Philippines, 1,735
 Inchon, Korea, 273
 Kobe, Japan, 840
 Kuang-chou, China, 1,307
 Lo-hsing-ta Mao-ti, China (via Steep
 Island Pass), 835
 Manila, Philippines (east of Taiwan),
 1,532
 Manila, Philippines (via Formosa
 Strait), 1,542
 Moji, Japan, 600
 Mokpo, Korea (via south of Kasa Do),
 342
 Nagasaki, Japan, 560
 Petropavlovsk, U.S.S.R., 2,226
 Pusan, Korea (via Maenggol Sudo),
 508
 Shang-hai, China, 523
 Shan-tou, China, 1,074
 Shimonoseki, Japan, 596
 Ta-ku, China, 205
 Tan-shui, Taiwan, 818
 Vladivostok, U.S.S.R. (via Maenggol
 Sudo), 1,009
 Wonsan, Korea, 813
 Yokohama, Japan, 1,140

YING-KOU, CHINA
 (40°40'40" N., 122°14'00" E.) to:

 Ports
 Hsia-men, China, 1,161
 Shang-hai, China, 713

 Ta-ku, China, 251
 Yokohama, Japan, 1,362

YIN-HSIEN, CHINA
 (29°52'30" N., 121°33'15" E.) to:

 Junction Points*
 Panama, Panama (via Shih-peng
 Chiang), 8,604
 Singapore (via Shih-peng Chiang,
 Steep Island Pass, Pai-chieh Hsia),
 2,091

 Ports
 Auckland, New Zealand (via Shih-
 peng Chiang), 5,077
 Darwin, Australia (via Shih-peng
 Chiang), 2,672
 Dutch Harbor, Alaska, U.S.A. (via
 Shih-peng Chiang), 3,414
 Honolulu, Hawaii, U.S.A. (via Shih-
 peng Chiang), 4,334
 Nikolayevsk, U.S.S.R. (via Shih-peng
 Chiang and South Channel), 1,779
 Noumea, New Caledonia (via Shih-
 peng Chiang), 4,118
 Pago Pago, American Samoa (via
 Shih-peng Chiang), 4,757
 Papeete, Society Islands (via Shih-
 peng Chiang), 5,875
 Petropavlovsk, U.S.S.R. (via Shih-
 peng Chiang), 2,237
 Rabaul, New Britain (via Shih-peng
 Chiang), 2,746
 Surabaya, Indonesia (via Shih-peng
 Chiang), 2,492
 Suva, Fiji Islands (via Shih-peng
 Chiang), 4,408
 Sydney, Australia (via Shih-peng
 Chiang), 4,574

YOKKAICHI, JAPAN
 (34°57'00" N., 136°40'00" E.) to:

 Ports
 Apra, Guam, 1,364
 Kagoshima, Japan, 476
 Osaka, Japan, 236
 Shimizu, Shikoku, Japan, 286
 Yokohama, Japan, 203

YOKOHAMA, JAPAN
 (35°27'00" N., 139°39'00" E.) to:

 Junction Points*
 Panama, Panama, 7,682
 Punta Arenas, Chile, 9,275
 Singapore (via Balintang Channel),
 2,889

*JUNCTION POINT.—See Preface for use of junction points.

Ports		
Aleksandrovsk, U.S.S.R., 1,143	Los Angeles, California, U.S.A., 4,839	Shimonoseki, Japan (via Naikai), 581
Apia, Samoa, 4,057	Lu-shun, China (via Bungo Suido and Shimononseki Kaikyo), 1,181	Shimotsui, Japan, 449
Apra, Guam, 1,352	Lu-shun, China (via Naikai), 1,218	Shiogama, Japan, 284
Auckland, New Zealand, 4,789	Malakal, Palau Islands, 1,731	Sitka, Alaska, U.S.A. (south of Aleutian Islands), 3,687
Avarau, Cook Islands, 4,849	Manila, Philippines (via Balintang Channel), 1,758	Sitka, Alaska, U.S.A. (north of Aleutian Islands), 3,620
Barbers Point, Hawaii, U.S.A. (via great circle), 3,382	Mazatlan, Mexico, 5,782	Surabaya, Indonesia, 3,092
Bellingham, Washington, U.S.A., 4,245	Midway Island, Pacific, 2,250	Suva, Fiji Islands, 3,967
Brisbane, Australia, 3,925	Miike, Japan (via Osumi Kaikyo), 725	Sydney, Australia, 4,330
Cebu, Philippines (via San Bernardino Strait), 1,762	Miike, Japan (via Bungo Suido), 766	Ta-ku, China (via Osumi Kaikyo), 1,394
Chim Wan, Ryukyu Islands, 830	Mokpo, Korea, 838	Ta-lien, China (via Osumi Kaikyo), 1,235
Ching-tao, China, 1,160	Moskalvo, U.S.S.R., 1,453	Tan-shui, Taiwan (via Osumi Kaikyo), 1,146
Chinnampo, Korea, 1,109	Nagasaki, Japan (via Osumi Kaikyo), 691	Teluk Kau, Halmahera, 2,163
Darwin, Australia (via Selat Sele), 2,989	Nagoya, Japan, 214	Tien-ching, China (via Naikai and south of Cheju Do), 1,465
De-Kastri, U.S.S.R., 1,176	Nakagusuku, Ryukyu Islands, 839	Tokuyama, Japan, 510
Djakarta, Indonesia (east of Direction Island and via Selat Gaspar), 3,194	Nase, Japan, 686	Truk, Caroline Islands, 1,832
Dutch Harbor, Alaska, U.S.A., 2,551	Nemuro, Japan, 653	Ube, Japan, 536
Guayaquil, Ecuador, 7,987	Nome, Alaska, U.S.A., 2,696	Uno, Japan, 405
Hachinohe, Japan, 436	Nonouti, Gilbert Islands, 2,931	Valparaiso, Chile, 9,280
Hagata, Japan, 608	Noumea, New Caledonia (via Bougainville Strait), 3,837	Vancouver, Canada (via composite sailing and Active Pass), 4,262
Hai-kou, Hai-nan Tao (south of Taiwan), 1,910	Ocean Island, 2,761	Victoria, Canada (via composite sailing), 4,194
Hakodate, Japan, 533	Omura, Bonin Islands, 523	Vladivostok, U.S.S.R. (via Tsugaru Kaikyo), 952
Hirohata, Japan, 368	Osaka, Japan (via Kii Suido), 359	Wake Island, Pacific, 1,740
Hiroshima, Japan, 519	Pago Pago, American Samoa, 4,135	Wei-hai-wei, China (via Naikai), 1,143
Hong Kong, B.C.C., 1,585	Palmyra Island, 3,680	Wei-hai-wei, China (via Bungo Suido and Shimonoseki Kaikyo), 1,106
Honolulu, Hawaii, U.S.A., 3,397	Papeete, Society Islands, 5,140	Wellington, New Zealand, 5,041
Hsia-men, China (via Osumi Kaikyo), 1,335	Petropavlovsk, U.S.S.R., 1,422	Wonsan, Korea, 921
Iloilo, Philippines (via San Bernardino Strait), 1,784	Ponape, Caroline Islands, 1,998	Wotje Island, Marshall Islands, 2,318
Imabari, Japan, 454	Portland, Oregon, U.S.A., 4,328	Yap, Caroline Islands, 1,571
Inchon, Korea (via Naikai), 1,070	Prince Rupert, Canada (south of Aleutian Islands), 3,863	Yen-tai, China (via Bungo Suido and Shimonoseki Kaikyo), 1,140
Inchon, Korea (via Bungo Suido and Maemul Sudo), 1,016	Prince Rupert, Canada (north of Aleutian Islands), 3,810	Yen-tai, China (via Osumi Kaikyo), 1,194
Iquique, Chile, 9,026	Pusan, Korea, 665	Yen-tai, China (via Naikai), 1,177
Itozaki, Japan, 446	Rabaul, New Britain, 2,526	Ying-kou, China, 1,362
Iwakuni, Japan, 497	Sai Gon, Vietnam, 2,419	Yokkaichi, Japan, 203
Jaluit, Marshall Islands, 2,442	Saipan, Mariana Islands, 1,262	
Kagoshima, Japan, 594	Sakaidecho, Japan (via Kii Suido), 449	
Kahului, Hawaii, U.S.A., 3,496	San Diego, California, U.S.A., 4,923	
Kamaishi, Japan, 348	San Francisco, California, U.S.A., 4,536	
Kaneohe Bay, Hawaii, U.S.A., 3,406	Seattle, Washington, U.S.A. (south of Aleutian Islands), 4,276	
Kaunakakai, Hawaii, U.S.A., 3,454	Seattle, Washington, U.S.A. (north of Aleutian Islands), 4,245	
Kiska, Alaska, U.S.A., 1,977	Selwyn Bay, Solomon Islands, 3,022	
Kobe, Japan, 357	Seward, Alaska, U.S.A. (south of Aleutian Islands), 3,363	
Kochi, Japan, 372	Shang-hai, China (via Naikai), 1,117	
Kodiak, Alaska, U.S.A., 3,141	Shang-hai, China (via Osumi Kaikyo), 1,040	
Komatsushima, Japan, 320	Shan-tou, China, 1,435	
Kuang-chou, China, 1,668	Shimizu, Honshu, Japan, 116	
Kure, Japan, 515	Shimizu, Shikoku, Japan, 411	
Kushiro, Japan, 594	Shimonoseki, Japan (via Bungo Suido), 545	
Levuka, Fiji Islands, 4,015		
Lo-hsing-ta Mao-ti, China (via Osumi Kaikyo), 1,217		

*JUNCTION POINT.—See Preface for use of junction points.

YOKOSUKA, JAPAN

(35°17'30" N., 139°39'30" E.)

Subtract 6 miles from Yokohama distances.

YORKTOWN, VIRGINIA, U.S.A.

(37°14'24" N., 76°30'30" W.)

Subtract 116 miles from Baltimore distances.

YOSU, KOREA

(34°45'00" N., 127°45'30" E.) to:

Ports

Kimchaek, Korea, 439
Kunsan, Korea, 245
Mokpo, Korea, 151
Najin, Korea, 535
Pusan, Korea, 97
Shimonoseki, Japan, 182

YUCATAN CHANNEL*

(21°50'00" N., 85°03'00" W.) to:

Junction Points*

Bishop Rock, England (track A), 4,177
Bishop Rock, England (track B), 4,150
Bishop Rock, England (track C), 4,103
Fastnet, Ireland (track A), 4,075
Fastnet, Ireland (track B), 4,045
Fastnet, Ireland (track C), 3,988
Inishtrahull, Ireland (track A), 4,200
Inishtrahull, Ireland (track B), 4,164
Inishtrahull, Ireland (track C), 4,086
Panama, Panama, 855
Pentland Firth, Scotland (track A), 4,406
Pentland Firth, Scotland (track B), 4,364
Pentland Firth, Scotland (track C), 4,266
Punta Arenas, Chile (via east of South America), 6,874
Strait of Gibraltar, 4,199

Ports

Almirante, Panama, 814
Alvaro Obregon, Mexico, 548
Amuay, Venezuela, 1,050
Apalachicola, Florida, U.S.A., 474
Barcelona, Venezuela, 1,378
Barranquilla, Colombia, 881
Belem, Brazil, 2,739
Belize, British Honduras, 337
Bluefields, Nicaragua, 629
Boston, Massachusetts, U.S.A. (via Nantucket Light Vessel), 1,615
Bridgetown, Barbados (south of Hispaniola), 1,549
Buenos Aires, Argentina, 5,910
Campeche, Mexico, 291
Cape Town, Republic of South Africa, 6,822
Cardenas, Cuba, 269
Cartagena, Colombia, 891
Carupano, Venezuela, 1,451
Casilda, Cuba, 307
Castries, St. Lucia, 1,452

Catia la Mar, Venezuela, 1,240
Charleston, South Carolina, U.S.A., 815
Charlotte Amalie, Virgin Islands, 1,200
Cienfuegos, Cuba, 285
Colon, Panama, 812
Corpus Christi, Texas, U.S.A., 764
Covenas, Colombia, 924
Freetown, Sierra Leone, 4,229
Galveston, Texas, U.S.A., 696
Georgetown, Grand Cayman, 257
Georgetown, British Guiana, 1,846
Great Harbor, Culebra Island (south of Cuba and via Windward Passage), 1,170
Guantanamo, Cuba, 582
Gulfport, Mississippi, U.S.A., 534
Habana, Cuba, 186
Halifax, Canada, 1,817
Hamilton, Bermuda, 1,335
Isabela, Cuba, 329
Key West, Florida, U.S.A., 251
Kingston, Jamaica, 550
La Guaira, Venezuela, 1,242
Lake Charles, Louisiana, U.S.A., 689
Limon, Costa Rica, 732
Manzanillo, Cuba, 482
Maracaibo, Venezuela, 1,096
Mariel, Cuba, 164
Matagorda Bay, Texas, U.S.A., 729
Matanzas, Cuba, 241
Miami, Florida, U.S.A., 398
Mobile, Alabama, U.S.A., 558
Montego Bay, Jamaica, 450
Montevideo, Uruguay, 5,689
Nassau, Bahamas, 562
New Amsterdam, British Guiana, 1,907
New Orleans, Louisiana, U.S.A., 577
New York, New York, U.S.A., 1,369
Norfolk, Virginia, U.S.A., 1,168
Nuevitas, Cuba, 528
Oranjestad, Aruba, 1,024
Pedernales, Venezuela, 1,567
Pensacola, Florida, U.S.A., 531
Philadelphia, Pennsylvania, U.S.A., 1,339
Pina, Panama, 816
Pointe a Pitre, Guadeloupe, 1,410
Porlamar, Venezuela, 1,407
Port Antonio, Jamaica, 536
Port Arthur, Texas, U.S.A., 681
Port au Prince, Haiti, 741
Port of Spain, Trinidad, 1,517
Portsmouth, New Hampshire, U.S.A. (via outside Nantucket Light Vessel), 1,632
Puerto Barrios, Guatemala, 439
Puerto Cabello, Venezuela, 1,203
Puerto Cortes, Honduras, 399
Puerto Cumarebo, Venezuela, 1,103

Puerto la Cruz, Venezuela, 1,381
Puerto Mexico, Mexico, 625
Puerto Siboney, Cuba, 545
Puerto Sucre, Venezuela, 1,399
Punta Cardon, Venezuela, 1,055
Rio de Janeiro, Brazil (south of Hispaniola), 4,702
St. John's, Canada, 2,305
Salvador, Brazil, 4,128
San Felix, Venezuela, 1,861
San Fernando, Trinidad, 1,548
San Juan, Puerto Rico, 1,111
San Juan del Norte, Nicaragua, 681
Santa Cruz del Sur, Cuba, 416
Santa Lucia, Cuba, 99
Santa Maria, Cuba, 381
Santa Marta, Colombia, 892
Santiago de Cuba, Cuba, 548
Santo Domingo, Dominican Republic, 929
Sint Nicolaas, Aruba, 1,036
Surgidero de Batabamo, Cuba, 229
Swan Island, 273
Tampa, Florida, U.S.A., 404
Tampico, Mexico, 716
Turiamo, Venezuela, 1,221
Tuxpan, Mexico, 689
Veracruz, Mexico, 654
Willemstad, Curacao, 1,094

YU-LIN CHIANG, HAINAN-TAO, CHINA

(18°12'00" N., 109°32'00" E.) to:

Ports

Chi-lung Chiang, Taiwan, 830
Hong Kong, B.C.C. 389
Kao-hsiung Chiang, Taiwan, 681
Manila, Philippines, 713
Sai Gon Vietnam, 622

YUMURTALIK, TURKEY

(36°45'00" N., 35°45'00" E.) to:

Junction Points*

Port Said, U.A.R., 372
Strait of Gibraltar, 1,672

Ports

Haifa, Israel, 240
Iraklion, Crete, 540
Izmir, Turkey, 639

YUNG-CHIA, CHINA

(28°01'45" N., 120°40'00" E.) to:

Ports

Chi-lung Chiang, Taiwan, 204
Ching-tao, China, 623

*JUNCTION POINT.—See Preface for use of junction points.

Hong Kong, B.C.C., 595
Inchon, Korea, 723
Shang-hai, China, 365

ZADAR, YUGOSLAVIA

(44°07'00" N., 15°13'00" E.) to:

Junction Points*

Port Said, U.A.R., 1,214
Strait of Gibraltar, 1,590

Ports

Ancona, Italy, 87
Brindisi, Italy, 280
Trieste, Free Territory, 142

ZALIV CHIKHACHEVA, U.S.S.R.

(51°27'00" N., 140°49'00" E.) to:

Ports

Bukhta Broutona, Kuril Islands, 783
Kasatka, Japan, 632
Matsugahama, Japan, 625
Nikolayevsk, U.S.S.R., 132
Shelekhovo, Kuril Islands, 971
Slavnoye, Kuril Islands, 628
Tomari, Japan, 578

ZAMBOANGA, PHILIPPINES

(6°54'00" N., 122°04'00" E.) to:

Junction Points*

Lombok Strait, Indonesia, 1,047
Panama, Panama (via south of Mindanao), 9,431
Singapore, 1,197
Wetar Passage, Indonesia, 995

Ports

Apra, Guam (via south of Mindanao), 1,467
Apra, Guam (via Surigao Strait), 1,484

Batangas, Philippines, 436
Belawan, Indonesia, 1,570
Cebu, Philippines, 252
Darwin, Australia (via Basilan Strait, Selat Bangka and Selat Manipa), 1,303

Iloilo, Philippines, 241
Jesselton, North Borneo, 412
Jolo, Philippines, 85
Kuching, Sarawak, 863
Manila, Philippines, 532
Pulupandan, Philippines, 237
Sandakan, North Borneo, 251
Tacloban, Philippines, 385

ZANZIBAR, ZANZIBAR

(6°10'00" S., 39°11'00" E.) to:

Junction Points*

Cape of Good Hope, Republic of South Africa, 2,358
Singapore, 4,060

Ports

Aden, Aden Protectorate, 1,731
Belawan, Indonesia, 3,727
Bombay, India (southwest monsoon), 2,541
Bombay, India (northeast monsoon), 2,538
Calcutta, India (via One and Half Degree Channel), 3,776
Darwin, Australia, 5,452
Durban, Republic of South Africa, 1,607
Fremantle, Australia, 4,536
Lourenco Marques, Mozambique, 1,388
Malacca, Malaysia, 3,945
Penang, Malaysia, 3,772
Port Louis, Mauritius, 1,388
Rangoon, Burma, 3,787
Sabang, Indonesia, 3,461
Tamatave, Malagasy Republic, 1,116
Tanga, Tanganyika, 75

Victoria, North Borneo, 563
Victoria, Seychelles, 1,011

ZEEBRUGGE, BELGIUM

(51°21'00" N., 3°12'00" E.) to:

Junction Points*

Bishop Rock, England, 393
Kiel Canal (east end), Germany, 354
Pentland Firth, Scotland, 505
Skagens Odde, Denmark, 479
Ushant, France, 380

Ports

Aberdeen, Scotland, 402
Amsterdam, Netherlands, 104
Antwerpen, Belgium, 64
Bergen, Norway, 558
Bremerhaven, Germany, 287
Cherbourg, France, 218
Dundee, Scotland, 394
Egersund, Norway, 440
Emden, Germany, 230
Esbjerg, Denmark, 318
Hamburg, Germany, 342
Hartlepool, England, 263
Hull, England, 205
Inverness, Scotland, 506
Le Havre, France, 186
Leith, Scotland, 392
London, England, 131
Newcastle, England, 289
Oslo, Norway, 586
Plymouth, England, 303
Portland, England, 229
Portsmouth, England, 179
Rotterdam, Netherlands, 73
Southampton, England, 197
Stavanger, Norway, 481
Wilhelmshaven, Germany, 274

ZONGULDAK, TURKEY

(41°28'00" N., 31°49'00" E.)

Add 136¼ miles to Istanbul distances for ports outside the Black Sea.

*JUNCTION POINT.—See Preface for use of junction points.

U.S. NAVAL OCEANOGRAPHIC OFFICE SAILING DIRECTIONS

New Old Ed.—Date
No. No.

AREA 1—CANADA, GREENLAND AND ICELAND

10	175	6—1960	British Columbia, Vol. I. Strait of Juan de Fuca and inner passages to Cape Caution
11	176	6—1962	British Columbia, Vol. II. Cape Caution to Alaska.
12	99	9—1952	Nova Scotia. The Bay of Fundy and Cape Breton Island.
13	100	7—1951	The Gulf and River St. Lawrence. Western shores of the gulf and the river and seaway to Cornwall Island.
14	73	8—1958	Newfoundland. Includes Strait of Belle Isle and St. Pierre and Miquelon Islands.
15	77	2—1951	Northern Canada. Labrador northward of St. Lewis Sound and Canadian mainland and archipelago, excluding Baffin Bay.
16	76	2—1951	Baffin Bay and Davis Strait. Includes northern Greenland eastward to Cape Morris Jesup.
17	75	2—1951	East Greenland and Iceland. Includes the island of Jan Mayen.

AREA 2—LATIN AMERICA AND ANTARCTICA

20	130	5—1952	East Coasts of Central America and Mexico. Includes north coast of Columbia.
21	128	3—1958	The West Indies, Vol. I. Bermuda, Bahamas, and Greater Antilles.
22	129	7—1963	The West Indies, Vol. II. Lesser Antilles and Venezuela.
23	172	5—1952	South America, Vol. I. East coast from Venezuelan border to and including Rio de la Plata.
24	173	5—1952	South America, Vol. II. East and west coasts between Rio de la Plata and Cabo Tres Montes, including Falkland, South Georgia, and South Sandwich Islands.
25	174	6—1960	South America, Vol. III. West coast between Gulf of Panama and Cabo Tres Montes.
26	84	9—1951	West Coasts of Mexico and Central America. The United States border to Colombian border.
27	138	2—1960	Antarctica. Includes islands south of latitude 60°.

AREA 3—BRITISH ISLES AND NORTHWESTERN EUROPE

30	146	5—1962	Ireland.
31	144	4—1952	South Coast of England. Scilly Isles to North Foreland.
32	145	4—1951	West Coasts of England and Wales. Lands End to Mull of Galloway, including Isle of Man.
33	147	4—1951	West Coast of Scotland. Mull of Galloway to Cape Wrath, including the Hebrides.
34	149	3—1950	North and East Coasts of Scotland. Cape Wrath to Fife Ness, including Orkney, Shetland, and Faeroe Islands.
35	150	5—1951	East Coast of England. Fife Ness to North Foreland, including the Firth of Forth.
36	135	5—1959	Eastern Shores of the North Sea. Dunkerque to Skagen.
37	132	4—1951	North Coast of France. Northwestern end of France to Belgium
38	133	5—1951	Bay of Biscay. West coast of France and north coast of Spain.

AREA 4—BALTIC, SCANDINAVIA, AND NORTHERN U.S.S.R.

40	140	1—1955	Northern and Eastern Shores of the Skagerrak. Lindesnes to Marstrandsfjorden.
41	141A	1—1956	Kattegat and The Sound. Skagen to Falsterbo, including Fakse Bugt.
42	141B	1—1958	The Baltic, Vol. I. Store Baelt, Lille Baelt, and coast from Denmark to Kap Arkona.
43	142	4—1951	The Baltic, Vol. II. Baltic Sea from Falsterbo Udde and Kap Arkona to the Gulfs of Finland and Bothnia.
44	143	3—1952	The Baltic, Vol. III. Gulfs of Finland and Bothnia.
45	139	1—1955	Southwest Coast of Norway. Lindesnes to Fedje.
46	136	4—1952	Northwest and North Coasts of Norway. Fedjeosen to Nyemyetski Point. U.S.S.R. including Svalbard Archipelago.
47	137A	1—1953	Northern U.S.S.R., Vol. I. Mys Nemetskiy to Mys Kanin Nos.
48	137B	1—1954	Northern U.S.S.R., Vol. II. Mys Kanin Nos to Ostrov Dikson.
49	137C	1—1954	Northern U.S.S.R., Vol. III. Ostrov Dikson to Mys Shmidt.

AREA 5—MEDITERRANEAN AND WESTERN AFRICA

50	105	4—1951	Southwest Coast of Africa. Cape Palmas to Cape of Good Hope.
51	134	6—1952	West Coasts of Spain, Portugal, and Northwest Africa and Off-lying Islands. Includes Azores, Madeira, Canary and Cape Verde Islands, and Africa southward to Cape Palmas.
52	151	4—1952	The Mediterranean, Vol. I. Strait of Gibraltar, Spain, Balearic Islands, northern Africa to Ras Agedir.
53	152	5—1958	The Mediterranean, Vol. II. France, west coast of Italy, Corsica, Sardinia, and Sicily, including adjacent islands.
54	153	3—1951	The Mediterranean, Vol. III. Southeast Italy, the Adriatic, and western Greece to Akra Tainaron.
55	154A	3—1963	The Mediterranean, Vol. IV. Libya, Egypt, Israel, Lebanon, Syria, and southern Turkey including islands of Cyprus, Rodhos, Karpathos, and Crete.
56	154B	2—1952	The Mediterranean, Vol. V. The Aegean Sea.

U.S. NAVAL OCEANOGRAPHIC OFFICE SAILING DIRECTIONS—Continued

New No.	Old No.	Ed.—Date
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AREA 6—MIDDLE EAST, EASTERN AFRICA, AND SOUTHERN ASIA

60	156	4—1951	Southeast Coast of Africa. Cape of Good Hope to Ras Hafun.
61	157	5—1965	Red Sea and Gulf of Aden. Includes Suez Canal, Gulf of Suez, Africa north of Ras Hafun, Suqutra, and Arabian coast eastward to Ra's al Hadd.
62	158	5—1960	The Persian Gulf. Includes Gulf of Oman and northern shore of Arabian Sea, eastward to Ras Muari.
63	159	4—1951	West Coast of India. Includes Ceylon and Maldive and Laccadive Islands.
64	160	4—1951	Bay of Bengal. Calimere Point to Salang Island, including Andaman and Nicobar Islands.
65	161	4—1952	South Indian Ocean. Madagascar and islands westward of longitude 90°.

AREA 7—AUSTRALIA AND SOUTHWEST PACIFIC

70	162	4—1951	Malacca Strait and Sumatra. Central and western Sumatra and southwestern Malay Peninsula.
71	126	5—1951	Soenda Strait and Western and Northeast Coasts of Borneo and Off-lying Islands.
72	163	5—1962	Java; Lesser Sundas; South, Southeast, and East Coasts of Borneo; and Celebes. Excludes western end of Java between Tandjung Tjankuang and Udjung Krawang.
73	164	4—1952	New Guinea. Include Halmahera and islands southward.
74	170	3—1952	North and West Coasts of Australia. Cape York to Cape Leeuwin.
75	169	4—1954	East Coast of Australia. Sydney to Cape York, including islands in the Coral Sea.
76	168	3—1952	Southeast Coast of Australia. Cape Northumberland to Port Jackson, including Tasmania.
77	167	3—1950	South Coast of Australia. Cape Leeuwin to Cape Northumberland.
78	171	3—1952	New Zealand. Includes Kermadec Islands and islands eastward and southward of New Zealand.

AREA 8—NORTH AND SOUTH PACIFIC

80	166	6—1952	The Pacific Islands, Vol. III. The south-central groups.
81	165B	1—1952	The Pacific Islands, Vol. II. Santa Cruz and New Hebrides groups, New Caledonia, and adjacent islands.
82	165A	2—1964	The Pacific Islands, Vol. I. Western groups, including the Solomon Islands.

AREA 9—FAR EAST, PHILIPPINE ISLANDS, AND EASTERN U.S.S.R.

90	78	1—1955	Philippine Islands, Vol. I. Northern islands, including western Negros, and northern Samar.
91	79	1—1956	Philippine Islands, Vol. II. Central islands, including eastern Negroes, southern Samar and northern Mindanao.
92	80	1—1956	Philippine Islands, Vol. III. Southern Mindanao, Sulu Archipelago, and Palawan.
93	125	5—1957	Western Shores of South China Sea. Singapore Strait to Hong Kong.
94	124	6—1959	Coast of China. Coast northward of Hong Kong to Yalu Chiang, and island of Taiwan.
95	123B	2—1951	Japan, Vol. II (Southern Part). The Naikai and islands southward, including Nansei Shoto, and Tsushima.
96	123A	2—1951	Japan Vol. I (Northern Part). Honshu, except the Naikai, Hokkaido, Chishima Retto, and Nanpo Shoto.
97	122B	2—1951	Southeast Coast of Siberia and Korea. Sakhalinskiy Zaliv to Yalu Chiang, including Sakhalin.
98	122A	2—1951	East Coast of Siberia. Mys Otto Shimidta to Sakhalinskiy Zaliv, including Ostrov Vrangelya.

CONVERSION TABLE FOR NAUTICAL AND STATUTE MILES

1 nautical mile=6,076.11549 . . . feet

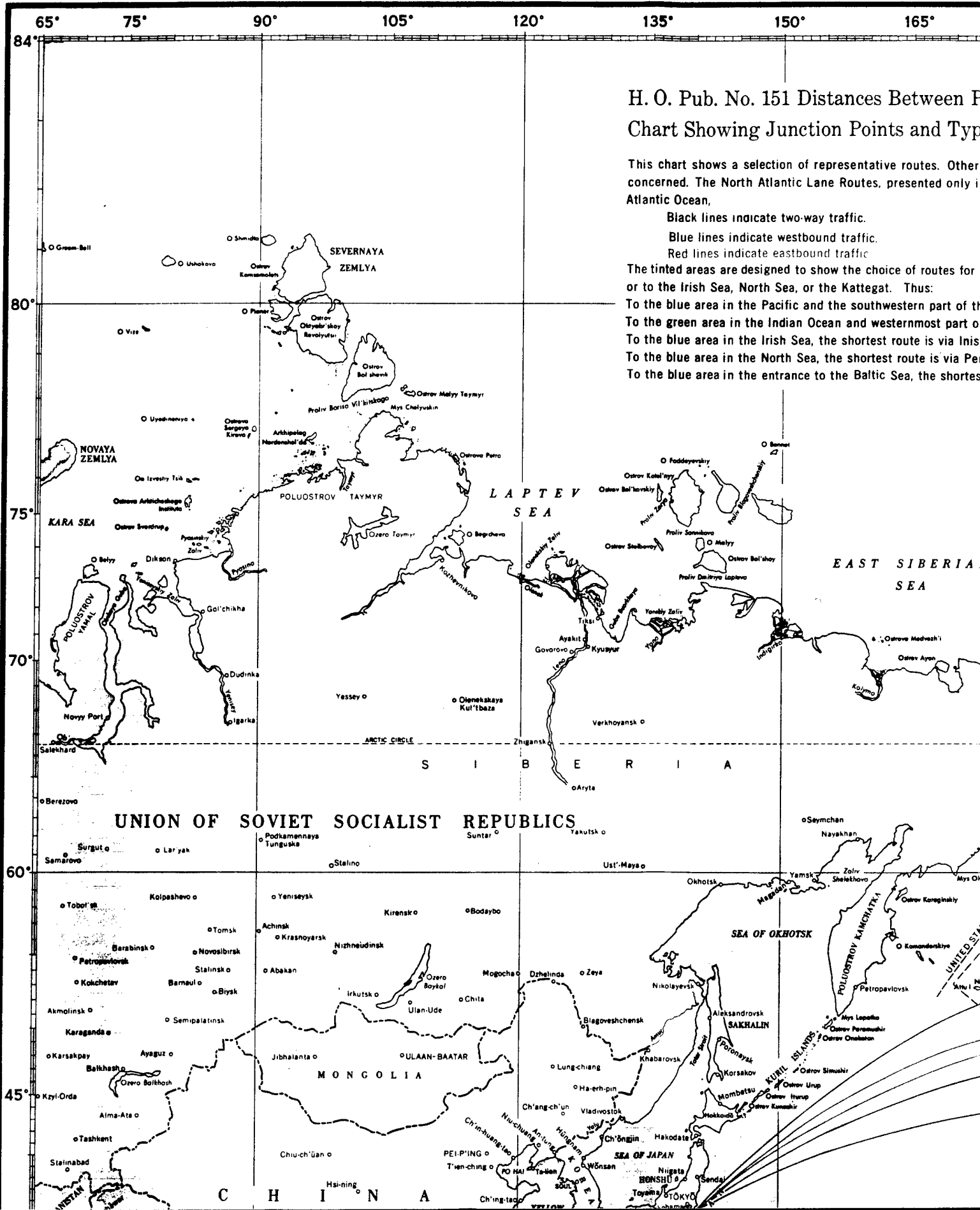
1 statute mile=5,280 feet

Nautical miles to statute miles				Statute miles to nautical miles			
Nautical miles	Statute miles	Nautical miles	Statute miles	Statute miles	Nautical miles	Statute miles	Nautical miles
1	1.151	51	58.690	1	0.869	51	44.318
2	2.302	52	59.840	2	1.738	52	45.187
3	3.452	53	60.991	3	2.607	53	46.056
4	4.603	54	62.142	4	3.476	54	46.925
5	5.754	55	63.293	5	4.345	55	47.794
6	6.905	56	64.444	6	5.214	56	48.663
7	8.055	57	65.594	7	6.083	57	49.532
8	9.206	58	66.745	8	6.952	58	50.401
9	10.357	59	67.896	9	7.821	59	51.270
10	11.508	60	69.047	10	8.690	60	52.139
11	12.659	61	70.197	11	9.559	61	53.008
12	13.809	62	71.348	12	10.428	62	53.877
13	14.960	63	72.499	13	11.297	63	54.746
14	16.111	64	73.650	14	12.166	64	55.615
15	17.262	65	74.801	15	13.035	65	56.484
16	18.412	66	75.951	16	13.904	66	57.353
17	19.563	67	77.102	17	14.773	67	58.222
18	20.714	68	78.253	18	15.642	68	59.091
19	21.865	69	79.404	19	16.511	69	59.959
20	23.016	70	80.554	20	17.380	70	60.828
21	24.166	71	81.705	21	18.249	71	61.697
22	25.317	72	82.856	22	19.118	72	62.566
23	26.468	73	84.007	23	19.986	73	63.435
24	27.619	74	85.158	24	20.855	74	64.304
25	28.769	75	86.308	25	21.724	75	65.173
26	29.920	76	87.459	26	22.593	76	66.042
27	31.071	77	88.610	27	23.462	77	66.911
28	32.222	78	89.761	28	24.331	78	67.780
29	33.373	79	90.911	29	25.200	79	68.649
30	34.523	80	92.062	30	26.069	80	69.518
31	35.674	81	93.213	31	26.938	81	70.387
32	36.825	82	94.364	32	27.807	82	71.256
33	37.976	83	95.515	33	28.676	83	72.125
34	39.126	84	96.665	34	29.545	84	72.994
35	40.277	85	97.816	35	30.414	85	73.863
36	41.428	86	98.967	36	31.283	86	74.732
37	42.579	87	100.118	37	32.152	87	75.601
38	43.730	88	101.268	38	33.021	88	76.470
39	44.880	89	102.419	39	33.890	89	77.339
40	46.031	90	103.570	40	34.759	90	78.208
41	47.182	91	104.721	41	35.628	91	79.077
42	48.333	92	105.871	42	36.497	92	79.946
43	49.483	93	107.022	43	37.366	93	80.815
44	50.634	94	108.173	44	38.235	94	81.684
45	51.785	95	109.324	45	39.104	95	82.553
46	52.936	96	110.475	46	39.973	96	83.422
47	54.087	97	111.625	47	40.842	97	84.291
48	55.237	98	112.776	48	41.711	98	85.160
49	56.388	99	113.927	49	42.580	99	86.029
50	57.539	100	115.078	50	43.449	100	86.898

To convert Nautical miles to Statute miles, multiply Nautical miles by 1.15.
To convert Statute miles to Nautical miles, multiply Statute miles by 0.87.

220

Distance	Speed in knots																		
	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	30
Nautical miles	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours	Days-hours
10	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
20	0-3	0-2	0-2	0-2	0-2	0-2	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
30	0-4	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-1
40	0-5	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-1
50	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-2	0-2	0-2	0-2	0-2
60	0-8	0-7	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-2
70	0-9	0-8	0-7	0-6	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3	0-2
80	0-10	0-9	0-8	0-7	0-7	0-6	0-6	0-6	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-3	0-3	0-3	0-3
90	0-11	0-10	0-9	0-8	0-8	0-7	0-6	0-6	0-6	0-5	0-5	0-5	0-5	0-4	0-4	0-4	0-4	0-4	0-3
100	0-13	0-11	0-10	0-9	0-8	0-8	0-7	0-7	0-6	0-6	0-6	0-5	0-5	0-5	0-5	0-4	0-4	0-4	0-3
200	1-1	0-22	0-20	0-18	0-17	0-15	0-14	0-13	0-13	0-12	0-11	0-11	0-10	0-10	0-9	0-9	0-8	0-8	0-7
300	1-14	1-9	1-6	1-3	1-1	0-23	0-21	0-20	0-19	0-18	0-17	0-16	0-15	0-14	0-14	0-13	0-13	0-12	0-10
400	2-2	1-20	1-16	1-12	1-9	1-7	1-5	1-3	1-1	1-0	0-22	0-21	0-20	0-19	0-18	0-17	0-16	0-16	0-13
500	2-15	2-8	2-2	1-21	1-18	1-14	1-12	1-9	1-7	1-5	1-4	1-2	1-1	1-0	0-23	0-22	0-21	0-20	0-17
600	3-3	2-19	2-12	2-7	2-2	1-22	1-19	1-16	1-14	1-11	1-9	1-8	1-6	1-5	1-3	1-2	1-1	1-0	0-20
700	3-16	3-6	2-22	2-16	2-10	2-6	2-2	2-23	1-20	1-17	1-15	1-13	1-11	1-9	1-8	1-6	1-5	1-4	0-23
800	4-4	3-17	3-8	3-1	2-19	2-14	2-9	2-5	2-2	1-23	1-20	1-18	1-16	1-14	1-12	1-11	1-9	1-8	1-3
900	4-17	4-4	3-18	3-10	3-3	2-21	2-16	2-12	2-8	2-5	2-2	2-23	2-21	2-19	2-17	2-15	1-14	1-12	1-6
1,000	5-5	4-15	4-4	3-19	3-11	3-5	2-23	2-19	2-15	2-11	2-8	2-6	2-2	2-0	2-21	2-19	1-18	1-16	1-9
2,000	10-10	9-6	8-8	7-14	6-23	6-10	5-23	5-13	5-5	4-22	4-15	4-9	4-4	3-23	3-19	3-15	3-11	3-8	2-19
3,000	15-15	13-21	12-12	11-9	10-10	9-15	8-22	8-8	7-20	7-8	6-23	6-14	6-6	5-23	5-16	5-10	5-5	5-0	4-4
4,000	20-20	18-12	16-16	15-4	13-21	12-20	11-22	11-3	10-10	9-19	9-6	8-19	8-8	7-22	7-14	7-6	6-23	6-16	5-13
5,000	26-1	23-4	20-20	18-23	17-9	16-1	14-21	13-21	13-1	12-6	11-14	10-23	10-10	9-22	9-11	9-1	8-16	8-8	6-23
6,000	31-6	27-19	25-0	22-17	20-20	19-6	17-21	16-16	15-15	14-17	13-21	13-4	12-12	11-22	11-9	10-21	10-10	10-0	8-8



H. O. Pub. No. 151 Distances Between Ports and Chart Showing Junction Points and Types of Routes

This chart shows a selection of representative routes. Other routes are shown in the North Atlantic Ocean, presented only in the Atlantic Ocean.

Black lines indicate two-way traffic.

Blue lines indicate westbound traffic.

Red lines indicate eastbound traffic.

The tinted areas are designed to show the choice of routes for or to the Irish Sea, North Sea, or the Kattegat. Thus:
To the blue area in the Pacific and the southwestern part of the Atlantic Ocean, the shortest route is via the North Atlantic.
To the green area in the Indian Ocean and westernmost part of the Atlantic Ocean, the shortest route is via the North Atlantic.
To the blue area in the Irish Sea, the shortest route is via the North Atlantic.
To the blue area in the North Sea, the shortest route is via the North Atlantic.
To the blue area in the entrance to the Baltic Sea, the shortest route is via the North Atlantic.

165° 180° 165° 150° 135° 120° 105° 90°

between Ports s and Typical Routes.

routes. Other routes are shown on the Pilot Charts and in the Sailing Directions for the area
esented only in part on this chart, are shown for each season on the Pilot Chart for the North

of routes for a vessel proceeding from New York to the South Atlantic, Pacific or Indian Oceans,

Thus:

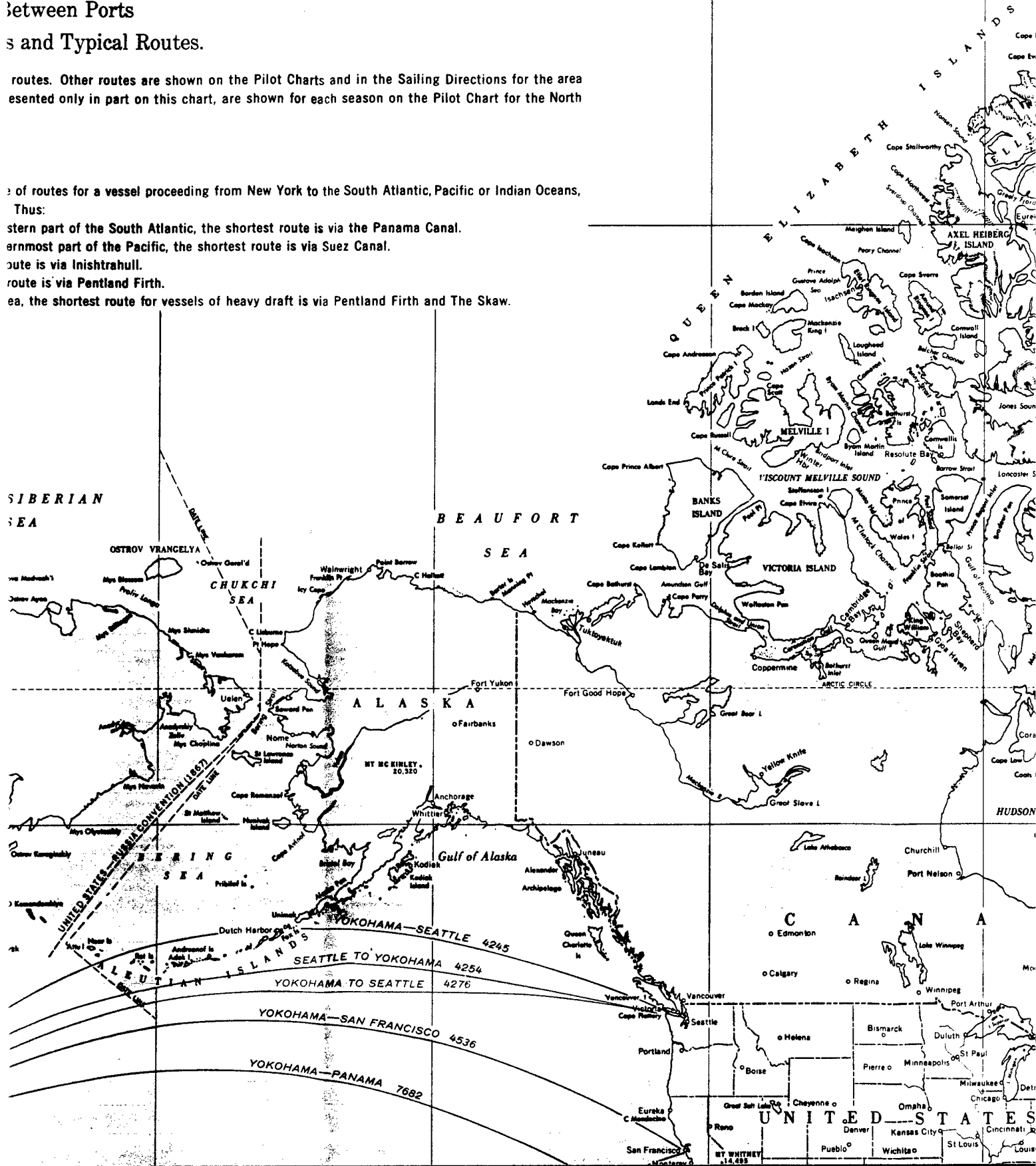
ernmost part of the South Atlantic, the shortest route is via the Panama Canal.

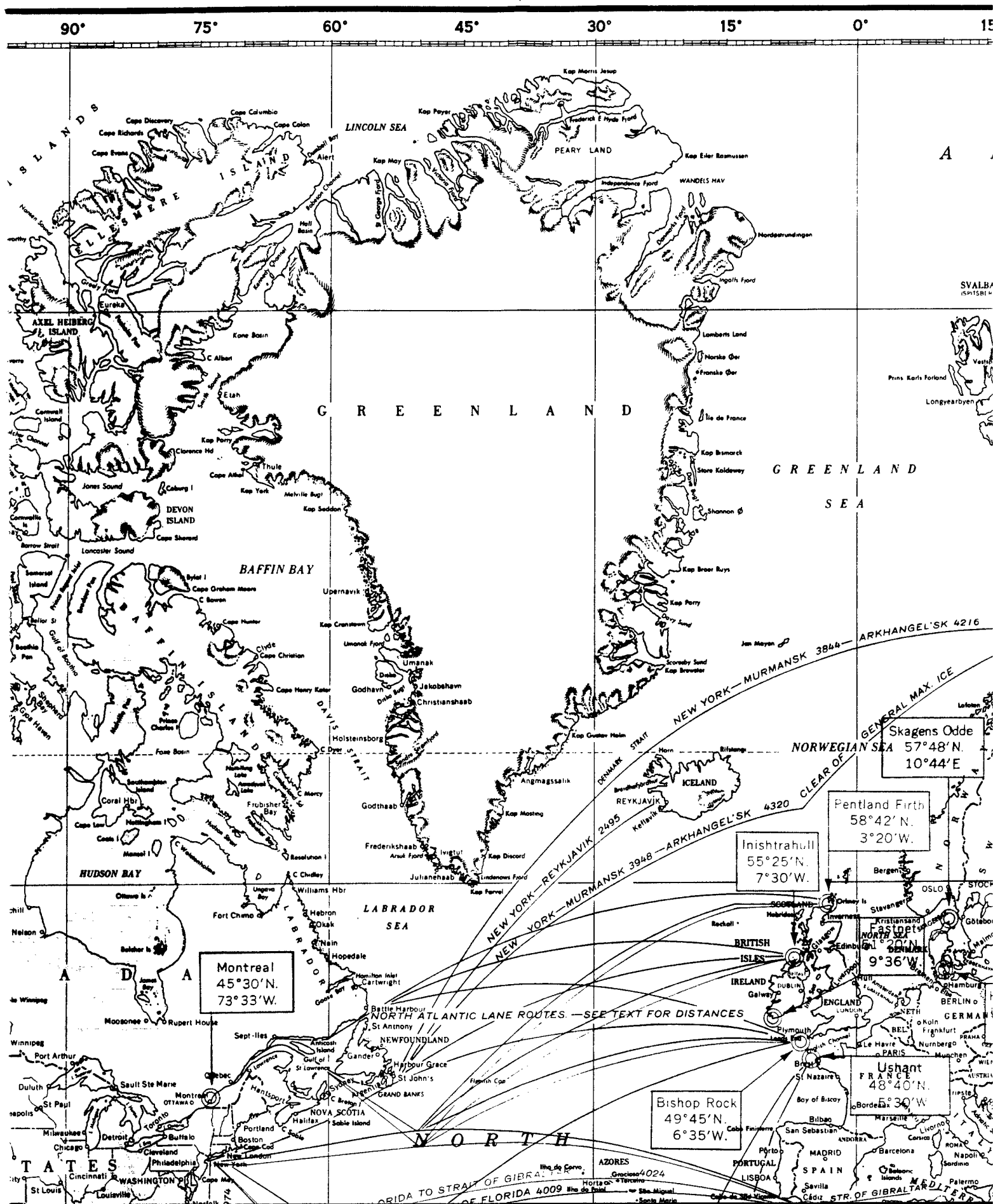
ernmost part of the Pacific, the shortest route is via Suez Canal.

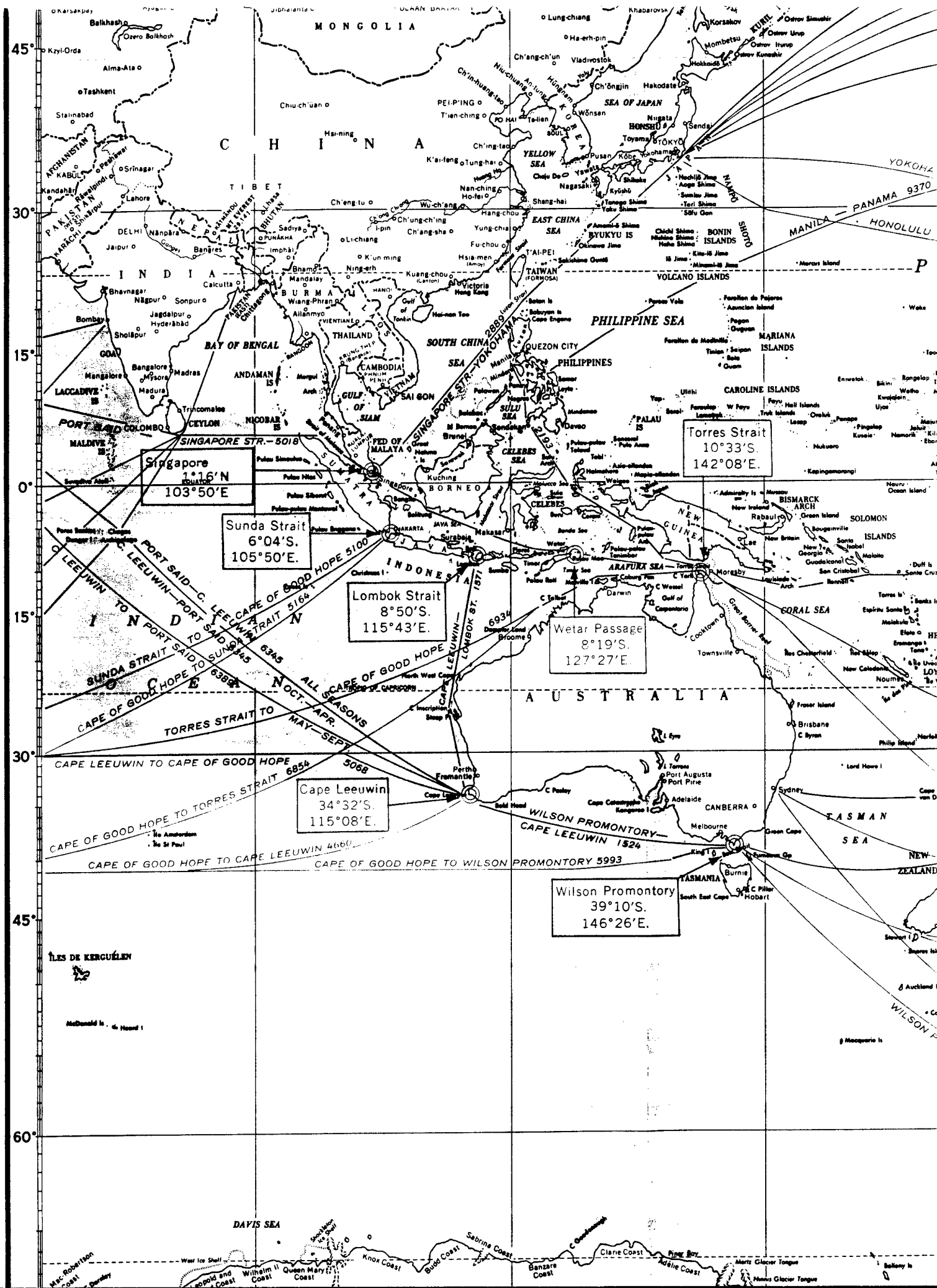
oute is via Inishtrahull.

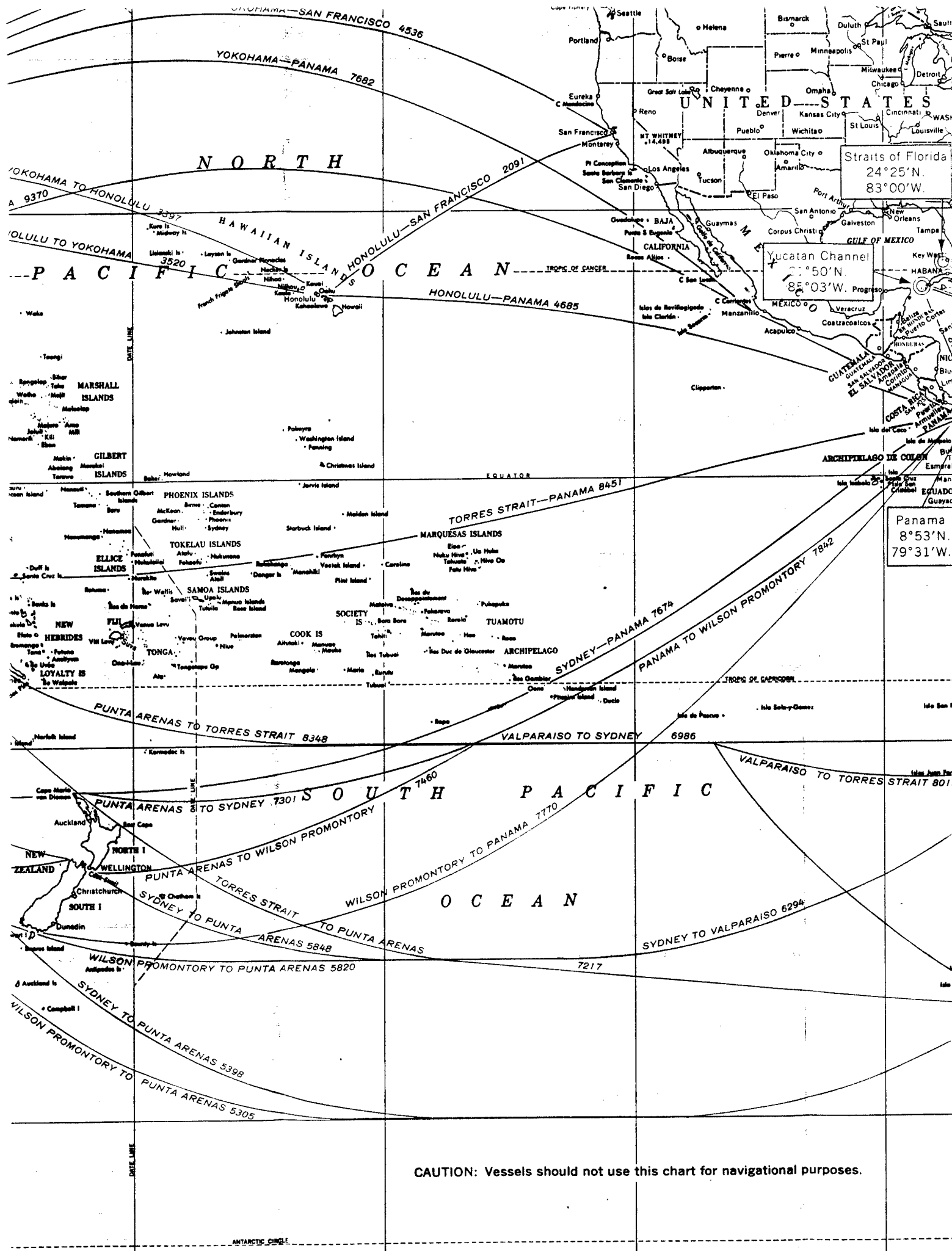
oute is via Pentland Firth.

ea, the shortest route for vessels of heavy draft is via Pentland Firth and The Skaw.

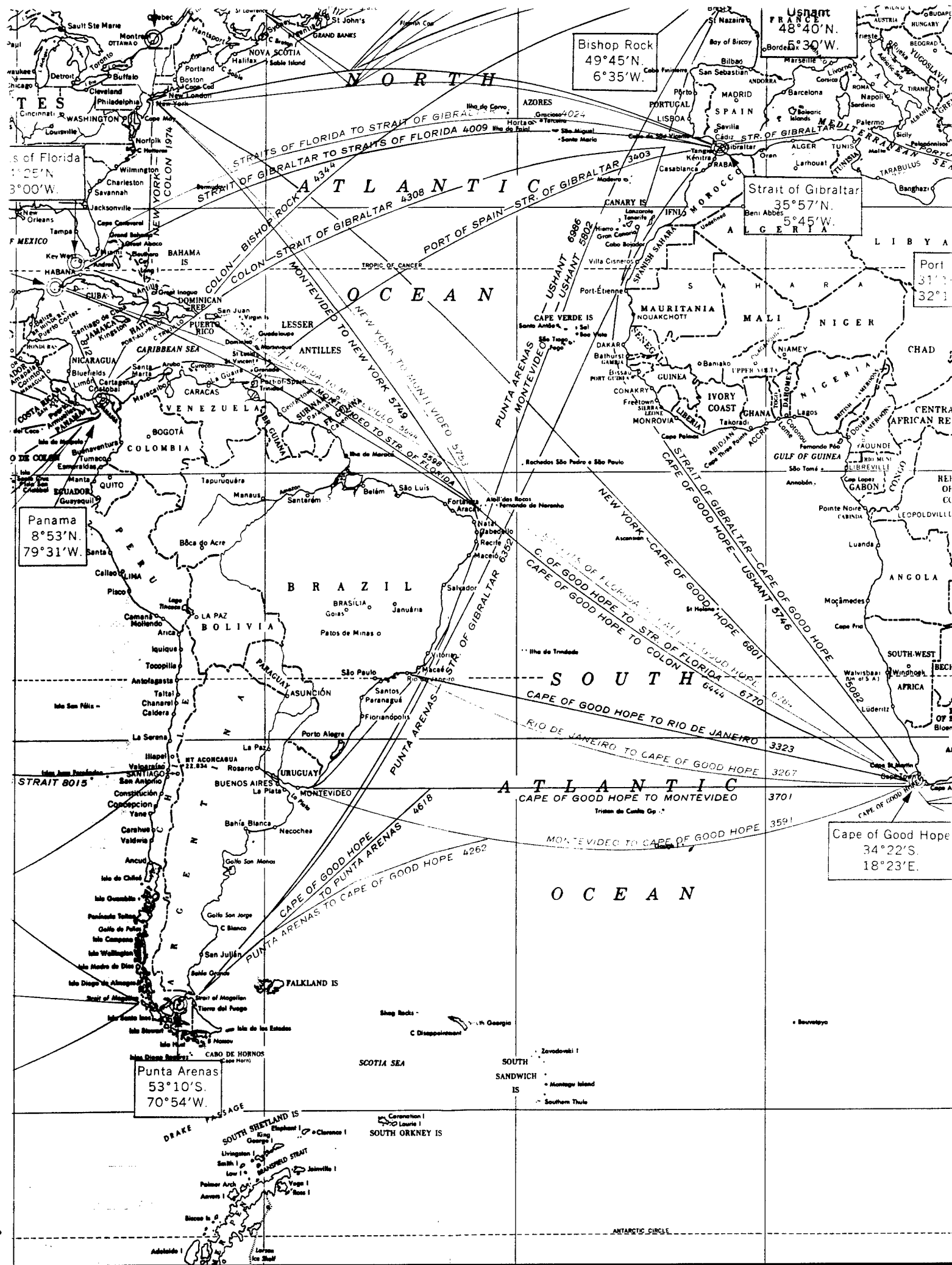








CAUTION: Vessels should not use this chart for navigational purposes.



Bishop Rock
49°45'N.
6°35'W.

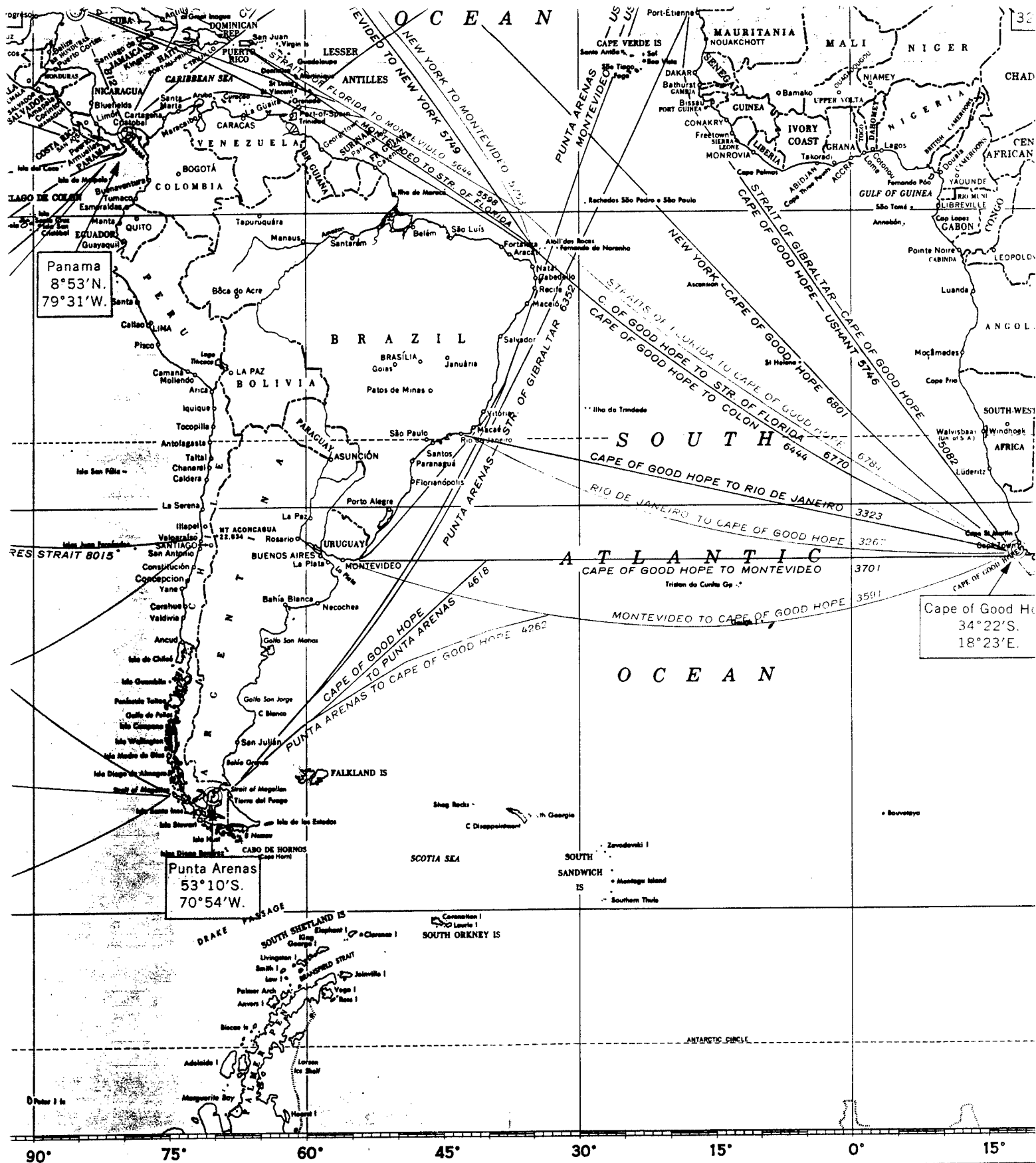
Ushant
48°40'N.
5°30'W.

Strait of Gibraltar
35°57'N.
5°45'W.

Panama
8°53'N.
79°31'W.

Cape of Good Hope
34°22'S.
18°23'E.

Punta Arenas
53°10'S.
70°54'W.



Hydrographic Office
NAVY DEPARTMENT
WASHINGTON, D. C.

NOTE

Geographic names or their spellings do not necessarily
reflect recognition of the political status of an area by
the United States Government

